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ABSTRACT

The roles of cooperation and choice in higher education are discussed in papers compiled from the 1977 Annual Conference of the University Teaching Methods Unit of the University of London. Financial constraints, a movement away from narrow specialist courses, effectiveness of interdisciplinary courses, instructional innovations, and changes in society are cited as factors that have made cooperation and choice in higher education an important issue. It is suggested that cooperative programs and freedom of choice support the view that higher education is for life and should not be concerned only with finding the most efficient and effective way of developing specific skills and the mastery of particular bodies of knowledge. The papers include: What is an Academic Discipline? (Sinclair Goodlad); Academic Cooperation in Britain (Tony Becher); Current and Future Developments with Joint Courses (Iain Bride); The London University Course Unit System (Roy Cox); Cooperation in Course Teams at the Open University (John Mason); The Cooperative Use of Open University Materials (Gerald Normie); Across the Binary Line: Establishing a Joint Postgraduate Diploma in a Polytechnic and Two Universities (Chris Parkin); Freedom to Learn? Problems of Cooperation and Choice in Independent Study (Paul Ramsden); Students, Choice and Problems (Ruth Deitch); Inter-Institutional Cooperation: A Perspective from the United States (Richard Miller); and Higher Education Cooperation in the European Community (Ronald Martin). (SF)

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Cooperation and Choice in Higher Education

Roy Cox (ed)

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Introduction

Roy Cox

There are three questions which might be asked about the title to this report of the 1977 Annual Conference of the University Teaching Methods Unit, why cooperation, why choice, and what is the link between cooperation and choice in higher education?

Perhaps the economic constraints of recent years have suggested many financial reasons for cooperating in the use of scarce resources and although such reasons may be increasingly important in coming years it could be wrong to think of them as providing the dominant reasons for seeking more cooperation in higher education. More important is the growing realisation that narrow specialist courses have been given too much emphasis in the past. The increasing rate of change in modern society has meant that it is difficult to predict just what sorts of skills will be necessary; adaptability and flexibility, moreover, are virtues which are now seen to be even more necessary. They were not ignored in specialist courses but broader, multi-disciplinary, problem-based courses do more easily encourage a wider range of skills and approaches. The ability to work more successfully in teams, moreover, is not easily learned in courses which have little time for allowing the students to appreciate the contributions of different disciplines to complex problem solving, and teaching itself can be improved by setting up course teams which overcome the traditional isolation which has too often been a feature of teaching in higher education. Some new methods of teaching, such as Keller Plan or Personalised Systems of Instruction and some project work are difficult to use effectively at all without a high degree of cooperation.

These reasons for thinking more about cooperation are perhaps rather obvious and they are amplified in many of the following chapters. But the reasons for emphasis on choice in higher education are perhaps rather less

obvious. It is clear that in the last 15 years or so there havebeen increasing opportunities for students to choose from an increasingly wide range of courses. There have always been options within traditional courses but the newer course-unit systems generally offer a very much more extended range of choice for students within broad guidelines. The development of project work and extended essays moreover allowed students to express their choice in very individual ways and in some instances students can now choose the way in which they are assessed. The reasons for this new emphasis probably have much to do with changes in society at large with its greater emphasis on self-expression and rejection of authoritarianism. It seems even truer today that commitment is more likely to be achieved where students feel they have the opportunity for making responsible choices rather than conforming to preordained set pieces. In theory at least many teachers now see that learning and intellectual development if they are to be effective and long-lasting need to be integrated with personal and emotional development. If we really expect our students to become independent, autonomous learners who will wish to go on learning once the constraints of our formal courses are left behind, then we have to give them responsibility for realistic and engaging choices within their education so that they may develop a sense of personal responsibility. It is inevitable and to some extent not unreasonable that some of education should be an arduous conforming to required standards but few teachers now believe that the general character of the students' education should in fact be learning to conform. We still do hear many complaints that students are too unmotivated and expect to be told what to do, but it may be, if we look carefully at how far their education so far has really given them the opportunity for a meaningful reflection upon a range of personal choices, we can see that very often they have not been well prepared for developing the independence which is often expected of them.

The issue of choice then in higher education involves rather more than simply avoiding unpopular charges of paternalism and authoritarianism. Behind it lies the view that higher education is for life and is not simply concerned with finding the most efficient and effective way of developing specific skills and mastery of particular bodies and knowledge.

But we might still ask why the link between cooperation and choice? Perhaps the most central issue here is that without a great deal of cooperation, and perhaps a great deal more cooperation than we often at present get, the increase of choice especially in relation to course unit systems may in fact mean that students courses lack a strong sense of intellectual coherence. No doubt it can be very valuable for students to attempt to make the links between different subjects in their own terms but often this can be very difficult where different subjects are taught by staff who have themselves not studied in the more interdisciplinary way expected of their students. Only through staff cooperating in more joint planning and teaching can students be given the right opportunity to make intellectual sense of their wide-ranging courses. But it is not only intellectual sense which is important. Students need above all to be developing a sense of personal identity during their studies and may need both social and intellectual support to gain a sure sense of professional identity, especially where the labels of their education and qualification no longer seem to provide this.

This question of the meaning of an academic discipline is discussed in the chapter by Sinclair Goodlad. He is not attempting to provide definitions so much as stressing what it is about a discipline which is worth preserving when we move into the area of inter-disciplinary and cooperative work. He finds much to say about the political viability of disciplines being very dependent upon social conditions both within an institution and in the wider environment. A particular interest of this chapter is his analysis of the way in which intellectual structure for students may be very dependent upon the social arrangements for their study and in particular on the 'interweaving of thought and action'.

Tony Becher is less philosophical in his approach but provides us with a critical survey of the types of cooperation which have been developed in Britain in recent years. Given the potential advantages of more cooperation he is not too impressed by how far we have travelled. One rather depressing general conclusion is that the further an activity is from the central core of an institution the more chance there is for cooperation. Whether this is 'proud independence' or 'short-sighted insularity' is open to question but his belief that many academics feel they will lose their self-respect if they take up other people's ideas suggests that there may be an underlying

insecurity about teaching. Lessons however can be learnt from the experience so far and perhaps the most important is the need for an adequate system of support and rewards.

The six papers which follow give particular examples of cooperative ventures in Britain. Ian Bride speaks from his long experience of working with joint honours courses and offers many practical suggestions stressing the need not only for a high degree of cooperation but for individuals to have clear responsibilities for the joint aspects of the course and for seminars and tutorials which deal particularly with the inter-play between subjects. He sees the need for students to develop a sense of identity which is not derived from the 'second class' membership of one of the departments. One interesting observation in relation to staff learning more about how students respond to their teaching was that the students tend to bring problems about one department to their tutor in another department, so cooperation may be a valuable stimulus to evaluation of teaching. He sees one of the most important features of the joint honours system is its flexibility in allowing students to choose to study two subjects instead of being restricted to one.

The opportunity for students to exercise a greater degree of choice was a feature of the London University course unit system and it was seen that this was only possible if colleges entered into a higher degree of cooperation than they had previously. The chapter on the history and development of the London system is a summary of six papers presented in the symposium. The course unit system in London is becoming more and more widely accepted but is still not without its critics. And in this chapter the problems and the opportunities offered by this system are discussed from the point of view of both academics and administrators.

The next two chapters concern the work of the Open University. John Mason gives us a revealing insight into the workings of the heart of the Open University cooperative system, the course team. Much has been said about the way in which traditional universities might learn from the products of the Open University, their television and radio presentation, their written course units, but it may be that the processes of course design will in the end be more important. It is clear that although many Open University academics find

work in a course team difficult it has nevertheless been a significant learning experience for many, not only in terms of the processes of course design, but particularly in relation to broader issues of teaching in higher education; where you have to work together conflicts in basic assumptions cannot be ignored as they often are in traditional universities.

In the second contribution from the Open University by Gerald Normie five examples of cooperation between the Open University and other institutions are given. It is now beginning to be realised that the Open University courses can be adapted for a wide range of situations in more traditional institutions. It is not simply a question of merely borrowing well prepared and produced materials, many of the cooperative projects have led to the development of stimulating new styles of teaching both in Britain and abroad.

A rather different type of cooperation is described by Chris Parkin. The course for teachers in higher education was planned and run by three institutions, City and Surrey University and on the other side of the binary line Hatfield Polytechnic. To have achieved such a joint course was a remarkable achievement and involves an interesting style of cooperation where no one institution is actually in charge. The discussion about the type of authority which was exercised will be interesting to any group of cooperators who are not, or perhaps do not wish to continue working on a hierarchical model.

The last of the case studies is an evaluation of a unique innovatory diploma based upon independent study by Paul Ramsden. The School for Independent Studies at the North East London Polytechnic has attempted to actually put into practice the high - traditional - ideals of developing independent learners capable of thinking for themselves and working on their own combined with the less traditional skills of working cooperatively in teams. The course has achieved some remarkable successes but problems arose from the extremely wide range of choice open to the students and difficulties of defining new types of role for both staff and students which often made too high demands on their skills of cooperation. The lessons could be valuable for all attracted to high risk teaching strategies.

Questions of student identity became very important at North East London Polytechnic and were raised in many other papers but Ruth Deitch takes it up from a different point of view, that of a student counsellor. It is a pity and perhaps rather surprising that the issues of choice and identity in relation to modular and multi-disciplinary courses have not been the subject of major research projects but the counselling service at the City Polytechnic has had many years experience with the modular based courses. The conclusions which Ruth Deitch draws from this are rather disturbing, suggesting that students at present are not adequately prepared for making the sort of choices which confront them. She traces the problem back to the schools but it is clear that if we are to offer more choices for students in higher education we will need to do more to ensure that students can use the opportunity to increase their autonomy, since failure to cope with opportunities offered by choice might be more damaging than acceptance of a situation where no choice is possible.

In the United States major cooperative projects between institutions are far more developed than they are in Britain and Richard Miller gives an account of how this has developed in the State of Illinois. Examples of particular projects are described but perhaps more interesting is his discussion of the principles which have been developed for setting up new consortia. Some of the keys to successful inter-institutional cooperation which he describes are straightforward but some such as 'high risk' or 'open endedness' are more surprising. The Illinois model for setting up a grant giving body for cooperation could be of interest to a similar development in Britain. Certainly their schemes have added to the range of choice available to students in Illinois and this has resulted in increased innovation and a saving of costs.

The book ends with an invitation from the European Commission for greater cooperation between institutions of higher education in the European Community. Ronald Martin describes the schemes for supporting study visits abroad and setting up joint study programmes. The work in this area is still in its infancy but the ultimate aim is that there should not be standardisation of conditions throughout Europe but rather that there should be a rich diversity where students and staff will have more opportunity for choice not only with a wider range of subject and approaches but with the opportunity to study and live in different European countries.

At the end of the conference there was a long discussion when a panel of speakers from the conference answered questions prepared during earlier small group sessions. The questions were preceded by statements putting them in context and these and the discussion raised a large number of issues and we felt it would be useful to include a brief report of some of these.

One group saw a number of problems in relation to course teams feeling committee structures and procedures were unable to cope with true educational problems and that cooperation could lead to stagnation. The panel suggested that cooperation should not be determined 'from above', it was important to have grass roots commitment and in the Open University a sub group or person was given particular responsibility to look at how to develop the course in relation to student responses. Where project methods were used, however, it was very much easier to keep completely up to date and staff defensiveness, another cause of stagnation, was less likely.

Another group was more concerned with inter-institutional and international cooperation and Elizabeth Monkhouse has given an account of their views and the panel discussion. They were looking at ways and means of cooperation and considered two problems. The first was concerned with the choice of a partner with which to cooperate. It is difficult to acquire adequate insight into another institution in terms of (a) philosophy and values and (b) structure and working, even in one's own country in order to decide whether it is compatible with one's own institution for purposes of joint action, and it is important to decide what weight to put upon complementarity and what weight upon similarity in aims and approaches. But if it is difficult to establish meaningful communications and to build personal relationships between two institutions within the same national borders it is far more difficult to establish such communications and relationships where differences of language and, even more, of culture intervene, probably limiting effective cooperation between both staff and students to those individuals who are capable of penetrating these barriers.

Their second problem was concerned with the selection of an objective of mutual benefit to the institutions involved and, the group hoped, ultimately to a wider public. This objective was seen as perhaps being in some new area where vested interests were not likely to be disturbed. It was also thought to be necessary to find a way of validating the joint course or part of the course in a way acceptable both inside and outside the cooperating institutions.

They asked: what strategy would the panel recommend (a) in the search for an appropriate partner - (and might some model be devised, first on a national and then on an international basis, to aid preliminary investigation?) and (b) in the joint search of the institutions for a mutually satisfactory area of co-operation?

Sinclair Goodlad felt that in the search for a partner it would be well for an educational institute to look for an organisation in *action* of some kind rather than for another educational institution, thus keeping their roles distinct and leading to fruitful cooperation in a project of value to both.

Chris Parkin thought cooperation between institutions was best seen as a problem-solving activity. It required scarce resources, including much time, for building up personal relationships. (These may be based on relationships made in a quite different context).

It was necessary to explore the climate for a trial period and to look for complementary qualities in those involved. As many as possible of the people ultimately to be involved should be brought into the negotiations at an early stage and he felt it was important to establish clear communication patterns and to avoid an unduly complicated administrative structure.

It was suggested by Gerald Normie that, paradoxically, it may be easier to find a partner abroad than at home and certainly easier to find an independent broker and he thought there was a case for building an international register of interests.

Ronald Martin said that the EEC Commission did provide a broker's service for small industrial firms, but it was unlikely to be available for a similar service in the field of education. The Commission was in possession of a great deal of information but this was in a passive state. He thought the British Council had information in a more active state and there was a useful clearing house in the Federal Republic of Germany. 'University News'(published by the EEC Information Service and traceable through the EEC Information Office at 20 Kensington Palace Gardens, London W8) might give useful leads. Desk research would have to be followed by a good deal of personal investigation on the spot.

In general he believed there was room for cooperation between institutions with both complementary and similar characteristics, the former in work where each partner contributes according to its specialism the latter where they work together in the same mode.

Perhaps it was appropriate that the conference ended on the theme of European cooperation though in the end the most important and influential side of cooperation may well be at the level of the course team. Europe now offers an exciting and challenging prospect which could well lead to a change in the whole climate of opinion about cooperation. The hesitancy and caution on which many of the speakers commented may be justified if we want to avoid a whole new set of problems and mistakes but if the risks are high so are the potential benefits not only in developing new dimensions for the personal, cultural and academic lives of staff but in opening new areas of choice and new experiences for students. In their lifetime cooperation may become a less useful skill and more a way of life, in a Europe which will be faced with major problems of preserving the values of cultural diversity while at the same time building on the strengths of more integrated social, economic and political union.

What is an Academic Discipline?

Sinclair Goodlad

The purpose of this paper is not to give a semantically pure definition of an academic discipline; it is rather to highlight social and intellectual features of recognisable academic disciplines which are probably worth preserving as institutions and departments co-operate in inter-institutional and inter-disciplinary courses.

An academic discipline, it has been said, is something recognised to be a discipline by other people practising disciplines! More precise attempts to define a discipline usually identify a body of knowledge, a method of dealing with that body of knowledge, and a social group which sustains the enterprise. For example, in the book on 'Interdisciplinarity' produced by the Centre for Educational Research and Innovation, C C Abt defines a discipline as:

"A specific body of teaching knowledge with its own background of education, training, procedures, methods and content areas."

Later in the same volume, Leo Apostel, concentrating on scientific disciplines, defines a discipline as follows:

"A science (for instance, biology) is the product of a *group* of people, in so far as they engage in certain *actions* (observations, experimentation, thinking) that lead to certain interactions, only possible by means of *communications* (articles, oral communications, books, including textbooks) geared primarily to the practitioners of the science themselves but also to the outside world. This

activity is not called a science until it has the characteristic of *reproducing* itself from one generation to the next by means of specific educational preparation. Moreover, a science is a *historic* and *dynamic* system, transforming itself in a given way."

The first definition gives primacy to a body of knowledge; the second to the actions of a group of people. There are good reasons why we should try to strike a careful balance between these two aspects of academic disciplines.

First, it is now common practice to juxtapose various subjects in joint honours or modular degrees. Is there any limit to the permutations and combinations which should be permitted? If so, how do we decide? Do the wishes of social (academic) groups determine what a student may study? Or does some conception of an academic discipline as an intellectual entity impose limitations?

Second, and relatedly, what constitutes a proper general or liberal education? Is education in a single academic discipline adequate? If not, why not? What would be an appropriate complement to, say, an education in Chemistry? Is liberal education to be achieved by the addition of compensatory chunks of other disciplines through a process of lateral enrichment? Will a student better appreciate the co-ordinating force of his main discipline if offered the opportunity to inspect its apparent certainties from the standpoint of another discipline?

Third, what ultimately gives coherence to degree courses, or parts of degree courses, which are amalgams of other subjects? For example, the professional studies of trainee teachers in the B Ed are a mixture of sociology, psychology, philosophy, history, and so on. Such a combination may work in a college of education when everyone concerned, staff and students, is concentrating on preparation for work in the classroom; but will the socially generated coherence survive if the studies are translated to a multi-purpose institution in which students might be studying the bits (sociology, philosophy, and so on) separately and alongside students with totally different preoccupations?

Fourth, a similar problem, is it possible to develop intellectually coherent academic disciplines which are truly responsive to the needs of the world out-

side educating institutions? Academic disciplines are often perceived to be theory-centred; the needs of society are usually problem-centred. Consequently there is a constant tension in disciplines whose practitioners deal with the world outside educating institutions between the drift to purity and fixing. Are medicine, engineering, town planning, social work, and so on properly described as academic disciplines? Or are they rather bundles of bits of disciplines loosely centred around specific problems? The drift to purity turns medics into physiologists, biochemists and so on, engineers into physicists, town planners into sociologists, and social workers into psychologists. Fixing turns medics into stretcher-bearers, engineers into TV repairmen and plumbers, town planners into traffic wardens, and social workers into dispensers of prams and blankets. What guiding principles, if any, may be said to make these action-oriented academic disciplines hold together?

Fifth, how is ideology to be related to academic disciplines? It is useless to pretend that people, teachers and taught, do not have strong beliefs. Are these to be regarded as irrelevant to what they study? Or are they to be recognised and dealt with explicitly? If they are regarded as irrelevant, both teachers and taught may react against the implicit ideological assumptions of their studies and resort to wrecking tactics. If they are recognised, there comes a problem in deciding how to deal with them. Ideologies commonly rely upon a unified world picture often incorporating a doctrine of the nature of man; they are holistic. By contrast, academic disciplines commonly concentrate on only one aspect of the nature of man (man in relation to his environment in geography; the behaviour of men in social institutions in sociology; individual behaviour in psychology, and so on); in short, although there are many areas of overlap, academic disciplines are commonly selective in order to be precise. The tension between holism and selectivity can be creative or damaging depending upon how it is handled. For example, Marxism, once the subject-matter of several disciplines (philosophy, history, economics, sociology) is now sometimes taken to be the guiding principle defining the preoccupations of some disciplines. Is this a good thing or a bad thing? How do we decide? (Julius Gould has argued that a Marxist bias in a major Open University course constitutes a disservice to its students - TES, 4 February, 1977.) Again, this time a movement in,

as it were, the opposite direction, theology, once a major commentating discipline, has now dissolved in some universities into religious studies. (See Goodlad, 1976, Chapter 5.) Can academic disciplines deal adequately with questions of belief?

In dealing with these problems, the two extreme positions could perhaps be represented as idealist and nominalist. The idealist position would stress the given-ness of the subject matter (perhaps even invoking some modern version of Platonic 'forms'); academic disciplines would be seen as deriving coherence from a methodology properly responsive to specific material. The nominalist position would stress the capacity of social groups to define the nature and content of disciplines ('Words are wise men's counters: they do but reckon them').

These two extreme positions rarely occur in pure form; but approximations to them abound and represent the tension which curriculum planners must somehow resolve. Paul Hirst's views come fairly close to the idealist position. Although he rejects the notion of an ultimate given-ness in knowledge (Cf. Hirst, 1974, 92 "That there exist any elements of thought that can be known to be immune to change, making transcendental demands on us, I do not accept."), he gives an account of forms of knowledge as distinct ways in which our experience becomes structured round the use of accepted public symbols. In the developed forms of knowledge, Hirst notes the following related distinguishing features:

"(1) They each involve central concepts that are peculiar in character to the form. For example, those of gravity, acceleration, hydrogen, and photo-synthesis characteristic of the sciences; number, integral and matrix in mathematics; God, sin and predestination in religion; ought, good and wrong in moral knowledge.
(2) In a given form of knowledge these and other concepts that denote, if perhaps in a very complex way, certain aspects of experience, form a network of possible relationships in which experience can be understood. As a result the form has a distinctive logical structure. For example, the terms and statements of mechanics can be meaningfully related in certain strictly limited ways only, and the same is true of historical explanation.
(3) The form, by virtue of its particular terms and logic, has expressions or statements (possibly answering a distinctive type of question) that in

some way or other, however indirect it may be, are testable against experience. This is the case in scientific knowledge, moral knowledge, and in the arts, though in the arts no questions are explicit and the criteria for the tests are only partially expressible in words. Each form, then, has distinctive expressions that are testable against experience in accordance with particular criteria that are peculiar to the form.
(4) The forms have developed particular techniques and skills for exploring experience and testing their distinctive expressions, for instance the techniques of the sciences and those of the various literary arts. The result has been the amassing of all the symbolically expressed knowledge that we now have in the arts and the sciences." (Hirst, 1974, 44.)

Hirst's position requires that an academic discipline build around a distinctive form of knowledge.

The Nominalist position is represented by Berger and Luckmann in 'The Social Construction of Reality':

"Reality is socially defined. But the definitions are always *embodied*, that is, concrete individuals and groups of individuals serve as definers of reality. To understand the state of the socially constructed universe at any given time, or its change over time, one must understand the social organisation that permits the definers to do their defining. Put a little crudely, it is essential to keep pushing questions about the historically available conceptualisations of reality from the abstract 'What?' to the sociologically concrete 'Says who?'" (Berger and Luckmann, 1966, 13[illegible].)

Few people would perhaps go all the way and maintain that academic disciplines were *entirely* socially invented; but social groups ultimately control the way in which academic disciplines appear as syllabuses. The Nuffield Group for Research and Innovation in Higher Education appropriately *begin* their study of 'Interdisciplinarity' (1975) with some extremely illuminating discussion of the effects of academic structures on the shape of degree courses. Whatever else academic disciplines may be, they are political arrangements in which a necessary tension is maintained between ideas and the social institutions through which

they are expressed and explored. Accordingly, in the remainder of this paper, I will consider what features of academic disciplines I believe to be worth preserving as institutions and departments within institutions co-operate. I will deal first with the aspects of knowledge which give universities their authority as social institutions and then with some institutional arrangements through which I believe that authority can be maintained and enhanced.

In 'Conflict and Consensus in Higher Education' (1976) I have argued that the authority of universities derives from the degree of structure applied to knowledge. To perceive the contrast between the academic approach to knowledge, one must compare the culturally primary form of that knowledge with the transformation of that form characteristic of academic disciplines. For example, cooking/nutrition; religion/theology; technology/engineering; literature/literary criticism; politics/political science. Non-academic persons may know more 'facts' than their academic counter-parts; the difference is that the academic's knowledge is highly organised. Compare, for example, a radio 'ham' with an electrical engineer, an antiquary with an historian, a 'naturalist' with a botanist. I have characterised the desirable authority of an academic as 'authoritative uncertainty' (Goodlad, 1976, 85-88). Because knowledge in academic disciplines is highly structured, the fundamental authority of the university scholar comes not so much from what he knows (though that is important) as from his capacity to discuss what still needs to be found out. The degree of structure in his present knowledge points compellingly to fruitful areas for research. Conceptual density is, then, I suggest a distinguishing feature of academic disciplines.

This does not mean to say that conceptual density is the only desirable quality to seek in university teaching. It is necessary for the student to have some unsorted knowledge to be organised by the concepts; indeed, undergraduates are more likely to be interested in 'certainties' than in authoritative uncertainty. It is at this point that considerations of the social organisation of knowledge are helpful.

Viable social institutions, as Robert Nisbet has reminded us, (1971), are sustained by dogma - beliefs held to beyond the need of constant re-examination.

Authoritative uncertainty is a goal which requires special types of institutional arrangements. Universities as thought organisations probably work best when, as Nisbet argues, they operate on the dogma that 'knowledge is important', and concentrate on highly structured reflection. But where then is the student to get the experience of the 'real' world on which to reflect?

It may be necessary to develop special types of study to ensure a proper balance. Engagement reflection patterns of study may be needed, combining periods of practical action (through industrial work, community service, and so on) with periods of structured reflection. Perhaps it is through this sort of 'cultural migration' that students may be led to see the organising principles of the academic disciplines with which they are involved. The full value of academic disciplines in offering intellectual structure, may in fact, only be recognisable to students if social arrangements are constructed to permit an interweaving of thought and action. (The chapters of 'Education and Social Action', Goodlad, 1975, give some examples of how this may be done). Almost certainly, specific attention will have to be given to the deep structure of the academic discipline. Seminars concentrating on the strengths and weaknesses of the structure in dealing with the 'real' world may need to be supported by compulsory examination questions or required sections of reports and essays requiring students to comment on such matters. Indeed, one might suggest that the more a course of study concentrates on concepts, the more necessary it is to provide for periods of action in which the strengths and limitations of the concepts may be perceived; the more a course is based on action, the more necessary it is to encourage deliberate seeking for unifying concepts through which the detail may be ordered.

These and other considerations may be summed up in the following five points about the desirable features of an academic discipline:

1 **Intellectual Structure**

Whether or not conceptual density is a feature of a discipline, intellectual structure should be. At the very minimum, an academic discipline should offer the student an intellectual whole into which to fit the parts of his experience. Where co-operation between departments or institutions is being contemplated, I would hope to see what the

Centre for Educational Research and Innovation call 'transdisciplinarity' (CERI, 1972, 25 and 106-107) - the combination of existing disciplines through some over-arching theoretical considerations - rather than 'interdisciplinarity' - in the sense of simply bringing together bits of pre-existing disciplines. The academic discipline which I have 'invented' in 'Conflict and Consensus in Higher Education' (Goodlad, 1976, 51-56) is of this sort.

2 Contextual relevance to an occupation or group of occupations

For undergraduate courses, I suggest contextual relevance to some occupation or group of occupations is a desirable feature of an academic discipline. By this I do not mean training for a job: manpower planning goals for education are often very unsatisfactory. But most disciplines emerge from the requirements of occupations even when they go on to assume a life of their own. Postgraduate students and university staff, supported by institutions specifically designed for theoretical studies, can usefully go on to abstractions and concerns remote from specific occupations. Hitherto undreamt of occupations may, indeed, emerge from their labours. However, if undergraduates are to enjoy the fruits of cultural migration, of engagement- reflection styles of study designed to point up the value of the intellectual structure, it is necessary for them to be able to see connections between that structure and the 'real' world. Contextual relevance to an occupation is not a theoretical desideratum of an academic discipline; but it is, I suggest, a practical one.

3 Self-consciousness

If exposure to an academic discipline is to be liberating for students, their study must necessarily be self-conscious. As Heinz Heckhausen puts it: "The teaching of a discipline at the university should start by clarifying its disciplinarity in order to sensitise the students to the possibilities and limitations of the chosen discipline. Early sensitising to a given disciplinarity is an educational innovation, and can be best done by comparing supplementary subject matters in neighbouring disciplines." (CERI, 1972, 86) It is not enough simply to teach content, or even methods for approaching content; a second-order consciousness must be developed - awareness of being aware.

Paul Hirst makes a similar point by suggesting that the forms of knowledge can be revealed by study of fields of interest:

"Though a liberal education is most usually approached directly in the study of various branches of the disciplines, I see no reason to think that this must necessarily be so. It is surely possible to construct programmes that are in the first place organised around certain fields of knowledge either theoretical or practical. The study of aspects of power, natural as well as social and political, might for instance be one element in such a scheme: or a regional study that introduces historical, geographical, industrial and social considerations: or a practical project of design and building involving the sciences, mathematics and visual arts. In this case, however, it must be recognised that the fields are chosen because together they can be used to develop understanding of all the various forms of knowledge, and explicit steps must be taken to see that this end is achieved." (Hirst, 1974, 51,)

If the organising principles of academic disciplines are not deliberately and self-consciously exposed, students might as well learn as autodidacts. Where a la carte or cafeteria systems of options are operated, it is common practice to give students guidance about suitable diet: presumably this is when the links and connections are explored. But where, one might ask, in the more conventional table d'hote degree course are the organising principles of the academic discipline as a whole discussed?

4 **Social coherence**

The nominalist approach to the nature of academic disciplines does a valuable service by pointing up the social characteristics of a discipline. It is often pointed out that students in single-subject honours degree courses have a sense of personal identity which derives in some measure from their involvement with an academic discipline which is a recognisable social phenomenon (with chairs, conferences, journals, departments and so on) as well as an intellectual one. Feelings of solidarity can be very strong in professionally oriented courses where the academic discipline has related institutional structures outside the educating institution - for example, the various engineering institutions. Similarly, the strong sense of 'collegiality' of mono-technic colleges of education may be due in some

measure to a strongly felt sense of common purpose. These points suggest that intellectual coherence alone is not enough to sustain an academic discipline; some suitable form of social grouping must grow from it or be the context in which it grows. Where new alignments are being explored, it may be necessary to invest a good deal of time and energy in what may seem to be purely social arrangements to establish an effective sense of identity, for example, designating one individual as course director; holding special functions (seminars or lectures) to put the newly constituted academic group into action; setting aside a special common room for those concerned with the new scheme; and so on. If a new transdisciplinary discipline is to take root, it will also be necessary sooner or later to create chairs, found journals, and so on.

5 Interconnections

One obvious way in which an academic discipline attains visibility is through having many people in different places all concerned with it. After a time even the most blatantly nominalist social grouping can come to have some of the gravitas of an established discipline and seem (whether it does so or not) to deal with elemental truths. However, until such an advanced state is achieved, there will be a practical problem of staff recruitment and staff mobility. For this reason alone, if for no other, it may desirable to see that an academic discipline has not only contextual relevance to a variety of occupations outside educating institutions, but also interconnections (through content, methodology, or social contacts) with other (better established) disciplines.

In conclusion, I suggest that the defining characteristic of an academic discipline is its intellectual structure, its power to organise and concentrate experience; the political viability of an academic discipline is, however, dependent upon contextual relevance to an occupation or group of occupations outside educating institutions, upon self-consciousness systematically developed, upon social coherence, and upon interconnections with other academic disciplines.

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Academic Cooperation in Britain

Tony Becher

Introduction

To someone looking at higher education from outside the system, as I did between 1970 and 1975, it seems very odd that there is so little sharing between one institution and another. To someone looking at it from the inside (as I now do) it seems amazing that there is any sharing at all. I propose in this paper first to review what evidence there is of existing collaborative ventures, and then to attempt some interpretation of that evidence - not only in terms of why co-operation doesn't happen, but also in relation to how it might be more actively encouraged. I shall make no attempt to disguise the fact that I believe academic co-operation to be a good thing rather than a bad, though I shall refrain from arguing this point at any length.

There is, of course, a wide range of activities over which academic institutions can (and occasionally do) work together, from the common use of physical resources and technical facilities to the collaborative development of learning materials and the sharing of ideas about teaching approaches. Two things are immediately apparent: first, that the further an activity is from the central core of the academic enterprise, the greater the chances of securing collaboration; and second, that most (though not all) of the examples of two or more institutions working together are to be found in the pure and applied sciences rather than in the social sciences and arts. These observations from the data are likely to prove important in any attempt at detailed interpretation.

It seems convenient to survey briefly in turn the different parts of the whole domain of academic co-operation, beginning with those where examples

are plentiful and the general principles behind them familiar and obvious. We shall then move gradually into the more unexplored (and to many academics intensely private) territory of undergraduate teaching. The sections which follow attempt to carry out this prescription.

Sharing facilities

Even in the good old days of the late sixties and early seventies when it sometimes seemed that money was no object, there were certain academic requirements which were so rare or so expensive that it was out of the question that every university or polytechnic should have its own. This was obviously true of specialist collections, whether in museums or libraries; but it was also true of elaborate pieces of scientific apparatus such as the CERN reactor, the small British share in space research, and the national computer network. Today, with a much greater and steadily growing pressure on funds, there is more and more incentive for institutions to pool resources and share physical facilities.

Leaving aside costly scientific apparatus, some worthwhile savings in routine items of furniture and equipment have been made in the polytechnic and college sector by taking advantage of the Local Authorities' purchasing consortia; in the present financial climate, the UGC's Equipment Sub-Committee is urging the universities to consider the pros and cons of introducing similar arrangements. Along the same general lines, there have been a few cases of neighbouring institutions agreeing to share the use of such facilities as playing fields and field stations to offset the increasing costs of maintenance. From time to time proposals are also made that student union premises should be provided jointly for all the higher education institutions in the same conurbation; but (as far as I know) the problems of negotiating joint budgets and allocating administrative and legal responsibility have proved too complex to allow this possibility to be realised.

All these aspects, though only peripherally connected with the activity of teaching and learning, relate to saving money which may then be used for the furtherance of more obviously academic ends. While not directly enhancing the quality of higher education, co-operation of this kind increases the quantity of the funds available to it. But one form of pooling of resources can in an immediate way

improve quality as well - namely, the systematic sharing of library facilities. That this is a practical possibility is clearly demonstrated by the collaboration between the University of Newcastle, Newcastle Polytechnic and the Newcastle City Library. Over the past few years, each has agreed to concentrate its book acquisitions in a particular disciplinary area (eg the Polytechnic has taken responsibility for building up a particularly strong collection in the applied sciences). Each provides shared access to readers from all three institutions, and makes available a union catalogue showing titles held in all three libraries. As a result, the limited funds for new acquisitions have been stretched considerably further than they would have done if each library had continued to pursue a go it alone policy. It is perhaps surprising that many other clusters of institutions have not adopted a similar approach, and especially those in large conurbations (Birmingham, Edinburgh, Glasgow, Leeds, London and Manchester are some obvious cases in point). Perhaps as the cost of books continues to rise and the annual sum available for buying them continues to fall, the Newcastle initiative will be more widely imitated.

Sharing courses and students

Although the relatively free movement of students from one academic institution to another is commonplace in a number of higher education systems in continental Europe, the strong pastoral and residential tradition in all the longer-established universities in Britain has made mobility the exception rather than the rule. There is some evidence that the rigidity of the one-student-one-institution convention is gradually loosening, even though there is still a long distance to go. The first signs are of a modest but noticeable growth in the number of formally-negotiated transfer arrangements and in the number of courses in which one institution provides part of the programme and another (or others) provides the remainder.

Taking in somebody else's students has always tended to bring out the worst in academics (the concern to demonstrate the superiority of one's own institution usually being manifested by putting the hapless individual back at least a year) - though the problem seldom arises at Master's level, where the process is routine and familiar. In the last few years, however, the Open University has been skilfully

changing the rules of the game, in this respect as in many others. Because it is not always able to provide the type of fairly specialised course at third-year honours level which other universities can do (since its teaching techniques only become economic when the number of students is quite large), the OU often has to seek transfer of its more able advanced students to another institution. It has now patiently negotiated bilateral agreements with a sizeable number of institutions which more or less automatically guarantee that undergraduates with a given OU credit rating will be accepted for an appropriate second or third year full time course. There are also a few other cases of mutually agreed interchange schemes, for instance of students who obtain high grades in engineering courses at Higher National Diploma level in a local authority institution, and who are then enabled to transfer to the second or third year level of an honours degree in a nearby university.

A number of instances can be noted in which different institutions have agreed to share in the teaching of a particular degree programme, and so to pool their specialist expertise. The arrangement is understandably more common at Master's level, where the need to bring together a group of high level specialists to teach (say) computer engineering is greater than it would be in a first year undergraduate course. However, there are examples at the undergraduate level as well. Though the University of London could in one sense be regarded as a single institution, in another it would be reasonable to speak of its constituent colleges as pooling their resources, especially in the central lectures on the arts side and in the course unit scheme on the science side (where students wishing to take certain units can only do so in another college). Again, the degree in Operational Research taught jointly between Sussex and Lancaster involves both a movement of staff and a migration of students between the two institutions. Another slightly different arrangement is exemplified in the four year degree in Chinese at Oxford University, where the students spend their first year on a special intensive course in the written and spoken language at Cambridge.

In many of these cases of transfer of students or sharing of staff the benefits are obvious. The mobility enables courses to be provided which would not otherwise have got off the ground, and students

to learn what they would otherwise have no opportunity to learn. Developments of this kind are a direct consequence of the fact that not every institution can reasonably expect to have advanced expertise in every field; and they aim to circumvent it by making rare specialisms more readily accessible.

Sharing course materials and teaching plans

When it comes to the basics of the curriculum - what topics degree courses should cover and how they should be taught - institutions of higher education can, according to taste, be described as proudly independent or as short sightedly insular. It is of course true - and academic publishers would long since have gone out of business if it were not - that most subjects have their best-selling textbooks. These generate some common threads through the whole span of courses in organic chemistry from Bangor to York, and give rise to some similarities in the economic history syllabus across the range from Aberdeen to Warwick. Indeed, the nature of what might be called the 'core curriculum' in most subject fields is not very diverse between different institutions (the students recruited are broadly comparable; the disciplinary norms are clearly established; the subject matter accessible at undergraduate level does not leave unbounded scope for choice). The specialist emphasis and the disciplinary ideology may well vary from one place to another, but the hard centre remains the same. Yet academics are noticeably reluctant, even where they are prepared to acknowledge these similarities, to go beyond the use of common texts to the more far reaching sharing of course materials and teaching plans.

The reasons for the reluctance will be touched on later: at this point, we shall review a few cases in which some reasonable degree of curricular collaboration has been achieved. One interesting experiment was concerned not only with the development of a common course outline and shared materials, but also with the joint participation of staff in carrying out the teaching itself. The collaboration was between the chemistry departments at Chelsea College London and at University College Cardiff in designing a scheme for teaching chemical thermodynamics (which involved, among other things, teams of students producing different sets of data and discussing their implications). A member of staff from the one institution visited

the other when the relevant section of the course was taught, both to help in the teaching and to observe and evaluate the differences in the two cases. The experiment, though successful, has not been imitated elsewhere or extended to cover other areas of the chemistry curriculum in Chelsea and Cardiff; although it clearly improved the quality of the teaching of a difficult topic, it was also costly in staff time, and is therefore not easy to generalise in a period of retrenchment.

A common form of inter-institutional curriculum development is centred on materials which are more than usually expensive and time consuming to produce on an individual basis. To take one example, the British Medical Association provides a common service to medical schools in editing and producing to semi-professional standards, programmed tape slide materials devised by individual departments on basic topics in the undergraduate curriculum. It markets these at relatively modest cost, so that any interested medical teacher can have access to the fairly substantial total pool of material. On a much more ambitious scale, the National Development Programme in Computer Assisted Learning (which has central government funding of £2 million for the purpose) has, over the past five years or so, concentrated on giving selective support to groups of academics who are interested in producing computer based study programs for undergraduate use. A condition of support is that programs (which often take the form of simulated laboratory experiments) should be actively 'exported' to other institutions - as, indeed, many have been.

The examples mentioned so far relate to smallish component elements of courses, which means that they are comparatively easy for other institutions to assimilate. But when it is a question of multiple use of quite substantial pieces of the curriculum, the difficulties of encouraging two or more institutions to collaborate are all the greater. One attempt, among a number of similar ventures initiated by the Nuffield Teaching Project, which deliberately concentrated on developing self-study materials related to topics which, though important, were regarded as marginal by most teachers - 'bridge' courses linking school to university curricula; 'service' courses on, for example, the basic chemistry needed for certain biological topics; and 'techniques' courses introducing students to certain routine laboratory

skills. But even this low key strategy met with only limited success, and many of the materials were not used outside the institutions which developed them. Another Nuffield sponsored project adopted a somewhat different approach, basing itself on the team techniques pioneered by the Open University to produce an introductory genetics course. The Open University was one of the four participating institutions, and the 'curriculum package' was designed for use both within the OU itself and in the context of traditional universities. Again, however, the actual outcome was that the other institution interested in the materials used them partially and selectively, rather than in the way in which they had been carefully designed to be used.

Pooling ideas

One of the least productive consequences of the insularity of universities and polytechnics is that, except in the domain of research, where there is a well developed series of discipline based networks, ideas developed in one place are seldom communicated to others. The result is that know-how about teaching and learning is evanescent: it does not build up cumulatively on a firm baseline. One might almost say that it remains obdurately in the form of a stone age culture, in which community after community has painstakingly to reinvent the wheel.

There have in recent years been various attempts to improve communication and to encourage academics to share ideas and experience in relation to their teaching, as they already do in relation to their research. One strategy, based on individual disciplines, has commonly stemmed from existing professional associations. For example, the Education Section of the Royal Institute of Chemistry and the Chemical Society has its own full time officer, and has stimulated and encouraged a great deal of worthwhile development work in chemistry departments across the country. In other cases, as with the flourishing Association for the Study of Medical Education, the activity is free-standing but recruits from a single large profession. The limitations of working in this way within one subject area are, of course, that the boundaries defined by research are not necessarily those required by a study of teaching. Many issues - such as the problems of assessment, or the potentialities of project work, or the development of small group

teaching techniques - cut right across disciplinary frontiers: many themes of current concern to physicists may well be relevant to sociologists, and vice versa.

Another, more general, approach to the interchange of teaching ideas is in fact based on themes or topics rather than subject areas. Sometimes the network is permanent and formalised (as in the case of the Association for Programmed Learning and Educational Technology); sometimes it is ad hoc, as in the series of annual conferences on designated topics run by the Society for Research in Higher Education, or in the repertoire of conference and workshop themes provided by the University Teaching Methods Unit.

At a more general level still, the Nuffield Group for Research and Innovation in Higher Education set out to record, and disseminate information about, specific innovations in teaching, learning and the context of the educational process. In the four year period of its existence, the Group published seven newsletters, recording between them nearly four hundred new developments, documented on the basis of visits to every UK university and to twenty of the thirty polytechnics. It also organised a number of small working conferences on specific themes, and produced more specialised publications on such topics as interdisciplinarity, the pros and cons of course unit and modular schemes, and the students' perspective on higher education.

One of the most interesting of the Nuffield sponsored curriculum schemes at the higher education level departed from the earlier tradition of concentrating on the development of teaching or learning materials, and put its main emphasis on generating a coherent and extensive sharing of experience. It worked on a more limited front than the generalist groups and organisations already enumerated; but, because it drew its ideas from a wide constituency, it was more broadly based than many of the groups related to a specific subject. The project in question - the Higher Education Learning Project: Physics (HELP) - functioned by building up a series of informal but well organised networks of academics with a strong interest in some particular theme. Each network planned how best to advance its own chosen topic- whether it be laboratory teaching, or the scope and limitations of tutorials,

or small group techniques in science, or student motivation. Each was also given the necessary time, funds and secretarial and administrative support to bring together the available knowledge to add to it from its own resources, and to shape it into a form sufficiently coherent for publication. The strategy adopted by this project has a number of strengths - not least that it draws mainly on an already existing professional group (teachers of physics in universities and polytechnics) and builds up their educational expertise in a very direct way, by challenging them with an intellectual problem about their own teaching. It is too early yet to say whether the networks created by the project will remain in existence now that the initial task has been completed: but it is already clear that the 'state of the art' of physics teaching has been significantly advanced since its inception in 1972.

Why co-operation is difficult and rare

It is relatively easy to criticise academics for their refusal to accept ideas developed outside their own immediate context. It is a less simple task to work out why this is so. I would suggest that at least a major part of the explanation rests on three factors. The first is that the most effortless course is, as in other aspects of life, to preserve the status quo. The second is that teaching is generally regarded as an amateur and private activity. The third, and in some ways the most crucial, is that the whole pattern of rewards and promotions is antithetical to the type of collaboration with which the present paper is concerned.

Let us examine these three factors in turn. Academics are not necessarily more conservative in their attitudes than anyone else; but they are at least as much the creatures of their circumstances and their contexts. One of the major distinctions between secondary and higher education is that school curricula are unified by a system of public and external examinations; the curricula of universities and polytechnics are diversified by a system of private and internal ones. This is true despite the fact that there are formal constraints (in the shape of the Council for National Academic Awards in the case of polytechnics and a system of external examiners in the case of universities) designed to ensure that proper academic standards are maintained. Although, as we have already noted

(on page 25 above), what is actually taught may be broadly similar across a wide range of institutions in any given subject area, the style and sequence of its presentation will vary with the personalities and predilections of the teachers concerned. Clearly, it is in many respects a more arduous and less rewarding job - especially for one who rightly regards himself as an expert in the subject matter in question - to adopt someone else's recommended form of presentation than to continue with his own. In the absence of any strong incentive to follow some externally devised set of curricular recommendations, it should not be surprising that academics choose to preserve their self esteem by teaching their own subjects in their own way (even where this policy is quite manifestly to the disadvantage of their students).

The tendency to insularity is reinforced by the antiquated but still surviving tabu on any discussion within the academic community of issues related to the process of education. This has certain features in common with the public attitude in Victorian times to sex: the reciprocal acts of teaching and learning are permitted to take place between consenting adults in private, but it is not acceptable to talk about, let alone to analyse and examine, what actually happens. It follows that no instruction, advice or guidance can be given to the unfortunate beginner: everyone has to learn for himself or herself how to do it. An explicit set of guidelines in the shape of curricular materials acquires the outrageous status of the 'Kama Sutra' or 'The A - Z of Sex'; it may be referred to covertly for useful suggestions, but can hardly be adopted openly as a standard guide to procedure. The amateurism which accompanies this pointless tradition of privacy is not altogether harmful: at best, it allows a pride of personal involvement which may be lacking in the hard-boiled professional, and ensures a sense of individual style rather than a bureaucratic and routine sameness. But it can also at worst be taken to license a level of performance which would not be permitted in any institution which took its teaching function responsibly.

Finally, if one looks at the pattern of occupational incentives and disincentives which govern the lives of academics, it is clear that there is little at present to encourage them to invest any substantial effort in inter-institutional collabo-

ration over curriculum development. By and large, promotion seems to result from publishing more research than one's colleagues, or showing greater skill in administration; although excellence in teaching is at least nowadays given more lip service, most younger academics believe (whether rightly or wrongly) that promotion and appointment committees pay little attention to it, and that even where they do, objective evidence of performance is hard to come by. It would seem to follow that any sensible and reasonably ambitious academic will hesitate to devote a great deal of his or her time either to collaborating with colleagues in other institutions over the design of teaching materials, or to adopting and assimilating the curricular programmes developed by others. Even setting aside questions of promotion, the esteem one earns from colleagues is strongly related to the tradition of independent and individualistic curricular planning; to take up someone else's ideas, however good, is somehow to abdicate one's own individuality and to lose one's self-respect.

In the face of this powerful set of disincentives, it can only be seen as encouraging that any curricular collaboration takes place at all. Even in relation to such less central activities as library coordination, it is easy to detect the forces which operate to preserve insularity. Where intercommunication between communities is poor, the natural thing is to regard even the inhabitants of the neighbouring village as ignorant savages: and why should one relinquish any element of one's own sovereignty to untrustworthy individuals who are bound to behave foolishly, or dishonestly, or both? The possibilities of overcoming insularity and promoting co-operation do, however, exist: we shall consider in the next and final section, how best they might be realised.

Future prospects for collaboration

It is at least a plausible hypothesis that the collective attitudes of a particular group of academics to their teaching is a pale reflection of their attitudes towards their research. Since the whole complex of incentives and rewards appears to be centred on research activity, it is that which powerfully shapes the initial values and beliefs of new entrants to the academic profession. However, different disciplines have different styles and traditions of research. In some fields, such as

medicine and technology, the main emphasis is on the advancement of practice, and on expertise as a consultant, rather than on highly abstract and theoretical study. This may not be unrelated to the tendency for medics and engineers to be among the more active innovators in teaching method. Similarly, the sciences have developed a strong emphasis on collective, team based investigation. It does not seem altogether fanciful to relate this to the noticeably greater openness of scientists to collaborate (at least within the same department, if not across departmental or institutional barriers) in curriculum planning and development. The sharp contrast of highly private, library based pursuits in the humanities could correspondingly have something to do with the comparative rarity of innovations in arts departments which involve more than an isolated individual, and the virtual non-existence of those which link together a number of institutions.

This notion of the research tradition as a key factor in determining basic academic values - and hence in shaping academic decisions on whether or not to collaborate with others in curriculum development - has both a passive and an active aspect. Taken passively, it may help those who are enthusiastic to disseminate interesting and promising ideas about teaching and learning to understand that the apparent apathy and complacency of their audience is less a reflection on the innovations themselves than it is on the priorities of institutions of higher education and those who work in them. But taken actively, the notion of the research tradition as strongly influencing attitudes towards teaching could well be used to help change the climate of opinion and the pattern of rewards and sanctions.

What is most clearly needed - and there now seems to be growing support for this contention - is so to modify the status and promotion structure within higher education as to give the same kind of public recognition to worthwhile teaching activity as is now given to competent research. This is of course a good deal more easily said than done. It will need, first and foremost, some set of readily applicable and generally accepted criteria to assess pedagogic productivity (even if these criteria have to be less crude than the usual yardstick in research, of the length of one's list of publications). But it will also require a number of people

of high status within the system (rather than the present band of miscellaneous educationists, among which I include myself) to take up the cause in a visible and public way. It will, further, demand some means of encouraging the emergence and continuing maintenance of networks of colleagues from different institutions along the lines already discussed in Section 5 above - some perhaps based on specific themes or topics related to undergraduate teaching, and others on the particular concerns of a single discipline or group of disciplines.

These suggestions are, of course, made in the context of the forms of inter-institutional co-operation which involve curriculum renewals rather than those which involve the sharing of facilities or the interchange of staff. The emphasis reflects my own bias: I believe in any case that the more straightforward ways of pooling resources will begin to be exploited without too much questioning as the screw is turned and the system adjusts itself to a state of stasis or even modest contraction. The less straightforward kinds of collaboration - which I hold to be the more important and worthwhile - will need to be stimulated by positive action.

One of the good things which may come out of the fundamental rethinking which universities and polytechnics will inevitably have to do in the next few years is a more clear sighted recognition of the relative importance of teaching and research. A case could be argued that the value of research has been progressively inflated to a point at which it assumes a disproportionate significance. We face a future where an even smaller proportion of the academic community will be able to command the additional resources needed to engage in the advancement of knowledge, and where scholarship (which has a direct pay off for teaching) will replace original research (which has a very indirect one at best) as the professional norm. At the same time, the proportion of every institution's income derived from student fees is already due to rise drastically, which puts a correspondingly greater premium on attracting a full complement of applicants for every course. This, taken in conjunction with the effects of a steadily falling birthrate (which will begin to impinge on universities and polytechnics within less than a decade) must mean that higher education will become more of a buyer's market than it is now - and that the institutions

who want to ensure survival will be compelled to give more sustained attention than they now do to the quality of their educational provision.

That change is already on the way is symbolised by an incident in a meeting I attended a few months ago. Its purpose was to discuss a now almost over familiar topic, the training of university teachers, and its membership included two vice-chancellors, one head of a London college, a couple of professors, and some seven or eight more junior academics. At one point I asked how far universities genuinely took into account evidence about teaching activity when considering new appointments, tenure or promotions. To a man, the senior staff assured me that such evidence was now taken seriously. Unanimously, the junior staff affirmed that it was not. Since it was the former who actually sat on promotion committees, I am inclined to think that they must be right; but until the latter come to believe that that is the reality, they will no doubt continue vigorously to perpetuate the myth, and to act accordingly. Nevertheless, if they are sensible and rational people, it ought not to take too long for the truth to sink in.

Current and Future Developments with Joint Courses

Iain Bride

At the outset I should make it clear that I am presenting this paper not as an educationalist, nor as a missionary for inter-disciplinarity, but simply from the point of view of one who has had practical experience in designing, administering and teaching on various joint honours degree courses in the University of Manchester Institute of Science and Technology over the past twelve years. My hope is that others who either are envisaging or are involved in such courses may benefit from our experience and in particular from the mistakes which we feel that we have made. Since their introduction in 1962 some 400 of our students have graduated with a joint honours degree and at present we have an annual intake of around forty such students.

The courses which I shall use as examples all involve Mathematics (that dubious subject which claims to be both Art and Science!) together with some other subject. In some cases these subjects may be regarded as having a natural affinity with Mathematics but in others there is no such obvious justification for the unholy alliance. The courses are: Mathematics and Management Sciences, Pure Mathematics and Language Studies, Pure Mathematics and European Studies, Mathematics and Physics, Mathematics and Education.

Why Have Joint Honours Courses?

The educational justification and reasons for designing these five courses tended to be different in each case.

In the case of Mathematics and Physics the two subjects have certain topics in common although in a single honours degree in either discipline these would be treated very differently. Thus a physicist might study Atomic Structure largely from the

experimental point of view and base his theories on evidence gained from these experiments while a mathematician may never enter a laboratory but build his theories by solving certain equations associated with the physical system. The hope in offering a course in which students are exposed simultaneously to both points of view was that they would be able to form a clearer picture of the overall situation and use the approach of one discipline to enhance that of the other. This is typical of two subjects which may be said to naturally complement one another.

In Mathematics and Management Sciences the situation was rather different. Certain fields of study in a Management Sciences degree course, such as Economics or Operational Research, inevitably make use of mathematical techniques sometimes of a quite sophisticated, albeit specialised, nature. Since the large majority of students studying Management Sciences do not have either the interest or ability to understand the mathematical background involved, these techniques have to be presented as a 'rule of thumb' with the unfortunate consequence that they are frequently used when they are not applicable, with disastrous results. Perhaps the classic example of this is in Statistics where it has been said one can 'prove' anything! There are however students who wish to study Management Sciences but who are capable of understanding the underlying mathematics and it was for such students that the course was designed. This then is a course for which it may be said that one subject gives insight into the other but not particularly the converse.

Mathematics and Education arose primarily with the career of teaching in mind since every year a considerable number of graduates from the single honours Mathematics degree enter the teaching profession. For such students it was considered advantageous that rather than specialise in some advanced mathematical topics they should meet certain concepts and theories which would enable them to understand more fully the problems of their likely vocation. In this case the subjects per se have little in common but the combination of a knowledge of both is desirable in certain circumstances.

The courses in Pure Mathematics and either Language Studies or European Studies are perhaps the hardest to justify. These courses are such that the two disciplines have nothing in common, but allow

students to pursue to degree level two topics in which they have an interest rather than having to opt for one at the expense of the other. (It is perhaps interesting to observe that some of our best students have been on these courses; perhaps the very fact that they show ability in two such different subjects marks them out as being academically outstanding.)

What Type of Students Choose Joint Honours Degrees?

Since each student has individual reasons for choosing a course it is difficult to recognise any general criteria for classifying Joint Honours students. However there is an inherent danger in such courses since several applicants and, perhaps even more so, Schools' Career Advisers, labour under the delusion that Joint Honours degrees are soft options. One reads references which state that 'he is not likely to cope with a Mathematics degree but should be ideally suited for Mathematics and Management Sciences'. Since the courses which I have mentioned all contain material in common with the final year of the honours Mathematics course, this misconception results in several applicants being unsuitable for the joint courses. In cases when such a reference is given, it is straightforward to identify and to reject such applicants; far worse is when the students themselves have chosen the course in an attempt to find a less demanding degree course. In consequence I believe that it is very much more necessary to interview applicants for joint courses in order to endeavour to establish their motivation in applying and to ensure that they have appreciated the varied content and demands of the particular course.

Fortunately such students are a minority, although a substantial one. The majority of students have given considerable thought to their choice and the very fact that the courses are 'unusual' seems to have made them consider their content and suitability far more than do students who apply for a single subject course. In consequence the motivation and effort of joint honours students is on the whole of a very high level.

Each year there are one or two students who enter a joint course and after a short while reach the conclusion that one or other of the disciplines is not for them. Once they have finally made such a

decision, we have always tried to allow such students to transfer to the single honours course of whichever subject they prefer and such students have invariably been successful after the change. I would suggest very strongly that such a move should be possible, and possible for as long a period after the start of the course as is consistent with the student being able to catch up in his own time with any topics he will not have covered in the single subject course - we usually allow at least up to the end of the first term. It is worth noting that the existence of joint courses also allows transfer in the other direction for students who have entered the single subject courses without having really considered the alternatives.

I have often been asked whether having to study two disciplines often with totally different approaches does not impose a greater load on the students. Although in certain cases a lack of breadth of background knowledge resulting from spending only half of one's time in a particular discipline may pose problems, the students themselves seem to welcome the contrast of the two components. At times they may feel somewhat schizophrenic, but the fact that they can escape from wrestling with, say, the mysteries of Abstract Algebra into writing an essay on perhaps Trade Unions and Management is one of the attractions of these courses rather than one of their drawbacks.

In the present era students are particularly concerned with career prospects and the extent to which a particular course will enhance their employment potential. One worry expressed by certain people is that graduates from joint honours courses are likely to be less employable than their single honours counterparts in that they don't know much about anything! All I can say is that our experience over the years has suggested the exact opposite, and that graduates from these courses have been very successful in obtaining employment in either of the fields open to graduates from each of the single subject courses. Indeed, far from being wary of such students, employers seem to welcome a breadth of knowledge rather than a specialism in some particular subject. One word of warning (which really pertains to the design of such courses) - it is important to ensure that the content is such as to render the graduates eligible for any professional qualifications which are pertinent to that subject, since this often affects career prospects.

For example, a graduate in Mathematics and Management Sciences is able to gain exemption from certain examinations for a professional accountancy qualification.

The Design of Joint Honours Courses

In the present academic financial climate it is almost a pre-requisite that joint courses must not require very many additional lectures and so must fit into a framework of single subject courses and avail themselves of lectures offered for such courses.

The first consideration in designing such a course is in selecting the topics from the two individual disciplines involved and our experience suggests that there are two distinct ways of doing this. One possibility is to choose certain topics of the single subject course and to pursue them for the same amount of time and to the same depth as would a student on that course. This is characteristic of the Pure Mathematics and Language Studies course and the Mathematical Physics course. In the first example both single subject courses have 'natural' divisions, on the one hand into Pure Mathematics and Applied Mathematics, and on the other into Language Studies and European Studies, in such a way that students can meaningfully study one of each of these pairs on its own. In the second example, where the two disciplines complement one another, the selection was based on the desire to study those topics which most contributed to giving the students a deeper insight into the common subjects of study. In either of these cases the selection of material was relatively straightforward.

The other possibility in selecting the areas of study is to try to cover as broad a spectrum of topics as in the single subject course but to cover these to a lesser depth. This immediately presents two problems. The first is the question of whether or not such a treatment is justifiable in an honours degree where a certain depth of understanding is expected, and the second is the inevitable consequence that the joint honours students cannot attend the same lectures as the single honours students and so additional lecture courses must be provided resulting in additional costs. Nevertheless, despite these drawbacks, certain subjects by their very nature demand that students are exposed to all the diverse aspects of study in that subject.

Perhaps the best example we have of this is Management Sciences which in its very essence involves students having at least some understanding of a variety of topics such as Economics, Accounting, Finance, Psychology and Sociology. In the same way in the Mathematics and Education degree it is fundamentally important that students do not study only certain mathematical topics but have a knowledge of all the different concepts involved in order that they may see in perspective and appreciate the aims of the syllabus of a school mathematics course. In such a situation it is vital that this point is recognised and that specially designed courses are offered to joint degree students. In the case of Management Sciences we have in the past done this for all three years of the course, but we are now endeavouring to compromise by having broad introductory courses in the first year after which, by specialising in the second year, students are able to take certain third year options in common with single honours students. By so doing we hope not only to reduce the provision of special courses for relatively few students but also to ensure that such students do pursue topics to the same depth as do their counterparts on a single honours course.

Perhaps the greatest single problem in designing any course is overloading of the students, and without doubt this problem is very much more evident in joint honours courses. At least in a course involving only one subject there are usually several people who can survey the course as a whole and pass fairly objective judgement on the total student work load involved. However it is rare to find any such person for a joint honours course. One could imagine that it should be possible for each department to select what amounts to one half of their single subject work load, and by combining these two halves to produce a reasonable total work load for the joint course. In practice, at least at a first attempt, this seems impossible. Perhaps one reason is the apparent belief held by all academics that their own particular discipline is more demanding than any other, so that joint degree students should have a heavier load from their department since they will be having an easy time in the other subject! In almost every course we have, in retrospect, decided that the initial content was over ambitious and as a result have had to reduce the loading.

Another problem which besets certain courses is that students may not see the relevance of the one

discipline to the other. In a course such as Pure Mathematics and European Studies, this naturally does not arise since the two are so disparate, but in such as Mathematics and Management Sciences it can arise frequently. Perhaps the prime cause of this problem is that the individual components of the course tend to be designed by 'experts' in the one or other department who are themselves not fully aware of how their colleagues in the other department may use the material which they have taught. Very often this can be overcome by close co-operation between the staff of the two departments at the planning stage and during the course itself, although in practice this does not always seem to as straightforward as might be imagined. There is also the point that since in general the students in a particular lecture course may be either joint or single honours students it is not possible to devote much time on, or slant the course towards, the dependence of the one discipline on the other. Nevertheless it is crucial to the success of a joint degree programme that students are shown any such interplay between the two subjects. The optimal strategy appears to be to provide seminars or tutorials designed specifically for these students at which such points can be discussed. Not only do these seminars provide an important educational link, but they serve to engender a spirit of purpose and identity amongst the joint degree students. Another way in which we have found the two disciplines can be most fruitfully linked is by means of a final year project involving aspects of both fields of study.

In the Mathematics and Education course such a problem is more acute since in this case there is a major field of specialist study, namely the particular problems inherent in teaching mathematics, which however would not normally be treated in either a mathematics degree course or in an education course. In this case it has been felt that if the joint degree course is to justify its aims two major lecture courses must be offered solely for students on this course, and here again co-operation at the planning stage is vital since such topics can so easily be dismissed by each department as belonging to the other, with no time being made available by either.

Finally as regards the designing of joint courses I would make a plea for flexibility. We have found

over the years that one major source of trouble in the final year arose because students had by then often developed a marked preference for one subject over the other and were frustrated at having to continue studying both to the same extent. Originally all the courses were such that students spent half their time in each department each year, but we have now introduced the system whereby in the final year they can, if they wish, spend two-thirds of their time in one department and one-third in the other. Around half the students choose to do this, with about equal numbers opting for each subject, and this amount of choice together with options within each subject appears to satisfy the requirements of almost all the students.

Running Joint Honours Courses

Above all it appears that in order to run joint courses both departments must actively and openly show their willingness to co-operate. Originally in UMIST we had a joint course in Electrical Engineering and Management Sciences which attracted many excellent, well motivated students. The course failed and ultimately terminated principally because the engineering department as a whole was not in favour of the scheme, seeing the joint honours students as second class citizens who made demands on valuable laboratory space at the expense of single honours students. Certainly some sacrifices are likely to be necessary in order to run joint courses and these must be accepted at the outset.

Given that both departments wish to run the course, it is in our experience vitally important to have in each department an individual who is committed to the course and who is given overall responsibility for its smooth running. Although a board of studies or the like can play an important role in developing inter-departmental relationships about the course, the fact that two separate groups are involved encourages matters to be left in a state of academic indecision. Not only can two individuals more rapidly assess the situation and reach an agreement, but the existence of such individuals provides a focus for any misgivings or doubts of both students and staff involved in the course. Since very often only certain staff in a department are involved in the joint courses it is necessary to ensure that the interests of these courses are not allowed to be jeopardised by those of the single subject courses and again it seems necessary to have a

committed individual to undertake this task.

Joint degree students can easily feel that they belong to neither department unless special provisions are made. From the administrative point of view it is desirable that one department accepts the responsibility for the course as a whole, but if this is also done for student welfare a feeling soon develops that the other department does not regard such students as really belonging to it. On the other hand if neither department accepts responsibility for student welfare, almost inevitably the students will suffer. We have found that the most successful system is to have tutors in each department who have only joint degree students and who are prepared to co-operate with their counterparts in the other department in discussing problems inherent in the joint course. Since students often appear to bring problems about one department to their tutor in the other department, it is important to have informal channels through which these can be conveyed.

Perhaps the principal technical problem in the running of joint courses is the considerable restriction which they impose on timetables. This is particularly so at their inception when it is often a case of attempting to modify a timetable which is already in existence. However much upheaval it may cause, it would seem to be better to accept that the situation is completely different and to redesign the timetable completely, especially since this should help to avoid a new joint course from taking second place. Although at the outset the problem invariably seems insuperable by suitable co-operation a solution can usually be found.

Assessment Problems

One of the most controversial topics surrounding the joint courses has been that of assessing the students and ultimately of determining their class of degree. We have tried various systems, each of which has had its drawbacks, but that which we are using at present appears to be the best.

Originally we set up examiners' boards consisting of all the staff from either department involved in the teaching of the degree course and this board considered the raw marks of the students in each paper. One difficulty was that around half the members of the board had no knowledge of the subject matter

examined in half of the papers and were not familiar with the customary standards in that subject. Perhaps more serious was when there was a disparity in the marks between the two components of the course. It was noticeable that examiners tended to vote en bloc according to how the student had performed in their component, with the result that the department having most members present determined the final result which could, in consequence, be somewhat biased.

The first major change which we introduced was for each department to consider separately the marks for the papers set by that department and to assess a joint honours student as though he was a student wholly within that department. Each of these two departmental examiners' boards then produced a single notional mark on an agreed scale to reflect the student's ability in that subject. The importance of the scale and the necessity for adhering to it can not be over-stressed. For example in the final year we use 40% as a lower limit for an honours degree and 70% as the lower limit for a first class degree. Within these limits no problems arose, but whereas in Mathematics we may award 85% to an outstanding student, a department such as European Studies would never exceed 75% as a mark for a similar student. In the same way an exceptionally weak student might be awarded 25% in Mathematics, while a similarly weak student would usually be given at least 35% in European Studies. Clearly if these marks are to be compared then the same scale must be used and we have agreed that in these extreme cases the full range of marks must be used.

When there were several joint degree courses involving altogehter six or more departments we set up a single board of examiners with two representatives from each of these departments to consider the two notional marks awarded to a joint honours student and to produce a final assessment. This worked quite well but had the disadvantage that the decision was often being made by people who were not involved at all in either of the subjects studied by that student.

We now have a separate joint honours examining board for each combination of subjects, consisting of an equal number (usually five) of members from each of the two departments under an independent chairman. This board receives the single notional mark from

each department and determines the final result essentially by taking the mean of the two marks. The advantage of this form of examining board over that outlined above is that when a student is borderline as regards this mean, all the members of the board have some knowledge of that student's background and, since the numbers from each department are equal, neither departmental point of view can outweigh the other. Fortunately extreme disparity between the marks awarded by each department has been rare, but when this does occur the system gives what is, perhaps, the best compromise.

Conclusion

Joint degrees have formed a considerable part of the undergraduate teaching of the Mathematics department at UMIST over the past fifteen years and they are felt to provide a viable and desirable type of course for many students. The numbers applying for such degrees are increasing and there is no evidence whatsoever that such graduates are at a disadvantage either academically or as regards career prospects. That there are problems in running such courses is undeniable but, as I hope has been shown, these can be overcome provided both departments are committed to the concept. I believe that the single most important feature of such a course is flexibility to enable students who are interested in more than one discipline to fulfil their educational needs in whichever field they find themselves attracted to as the course develops.

The London University Course Unit System

Roy Cox

We believe that it will not only be members of London University who are interested in the working of the London course unit system which has developed rapidly since it was introduced in 1966 but the full texts of the six papers are rather long to include in a book which is aimed at a general readership. We are therefore producing the six separately and including only a summary in this book.

Sir John Gray opened the symposium with a brief account of the background of the course unit system and the reasons why it was set up. The first proposals for a course unit system came in 1963 when a faculty board was trying to deal with the problem of students who were registered for special degrees but who, while being of degree standard, were not able to get honours in particular subjects. Three schemes were drawn up. One was an adjustment of the existing system, the second resembled a Cambridge Tripos and the third was a course unit system. There was overwhelming support for the course unit system and after consultations with college faculties a full proposal for a new degree structure was drawn up and passed through the Academic and Collegiate Councils, to be given formal approval by the Senate in 1965.

There were 3 basic aims in the minds of most of those concerned:

a) to allow students to choose or be channelled at various stages of their career into courses for which they had sufficient aptitudes

b) to allow coherent areas of science which crossed conventional departmental boundaries to be taught

c) to allow more flexibility to the schools of the University

The question of freedom of choice was particularly important in the case of science subjects where there was a school-imposed constraint to choose mathematics or biology at 'A' level. Later the biologists became interested in the question of developing courses which crossed departmental boundaries. It was felt that in the case of Neurobiology it was practically impossible to develop a coherent course in this field under the present system. The question of giving more independence to schools arose later but Sir John said he had little doubt that it became probably the most important reason for support of the proposal. The course unit proposals were carried because the principal aims were complementary and not conflicting.

The present state of development of the course unit system was outlined by Professor Overend. Initially the scheme was limited to internal science students but the doubts expressed by other faculties gradually moderated and by 1976 30 colleges and institutes were operating a course unit system still mainly in science but over 300 students from arts, engineering and economics graduated with a unit-structured degree. A recent expansion has been in the colleges of education affiliated to the University of London Institute of Education. In total by the spring of 1977 approval had been given for over 10,000 courses for unit-structured degrees.

As the system developed so it became clear that changes and clarifications in the regulations were needed. The earlier definition of the workload associated with the course unit as being 'the amount of study which any adequately prepared student can reasonably be expected to complete in a year' was extended to include 'that is to say one third of the total workload which every students who is capable of obtaining a degree at all should be able to manage'. This was relevant to the issues of honours which could be gained either by high standards or by more courses. Other changes concerned the titles of course units which were in future to be descriptive of content and words like 'ancilliary' and 'honours' were seen to be inappropriate for the course unit system. There was a danger, too, of a multiplicity of courses and it was decided that although an evaluation of courses should be in multiples of one quarter, courses valued at less than half should only be permitted in special circumstances. In the early seventies more examination methods were being used and it was considered necessary to introduce a regulation that not more than 3 course units could be wholly

assessed by prior disclosure methods, but the view of normal included both open book exams and multiple choice exams.

In 1974 a standing sub-committee on course unit policy was set up with representatives of the schools and subject interests to keep the regulations under review. They discussed such things as the stage of the 9th course unit - although 9 were necessary the candidate only need satisfy the examiner in 8. The question of a 4th year of study needed clarifying, too, it was not to be used simply to improve the grade of degree. Transfer of students became another issue requiring discussion as it was often difficult to specify exact equivalents between course-unit courses and courses followed both outside the University of London and under different regulations from within.

Professor Overend concluded by saying that the use of inter-collegiate examiners in addition to external examiners on panels of visiting examiners had been successful and that standards had been fully maintained. There was still the tendency to over-examine students but this was being restrained. Control by the University was still a matter of concern and a searching enquiry was not always the basis for approval. It had been suggested that the procedure whereby the University is involved in detail of courses offered by schools' course unit degrees but is not involved in the overall degree programme should be reversed, but Professor Overend felt that the great flexibility of the current system might be endangered by this change and in any case an involvement through boards of studies of teachers throughout the University who are specialists in the content of courses submitted for approval in scope and unit rating is a vital one in maintaining common standards of courses.

Professor Chapman's contribution was in the form of a lively dialogue between advocates pro and con. Unfortunately it is very difficult to produce a brief summary in this form and we shall restrict ourselves to outlining the main points of the arguments.

Firstly, freedom to the Colleges and variety is stressed with the new system, but the problem is raised of students selecting a suitable college and employers knowing what a degree in a 'subject' really means. With the regulation of the content of courses by the University and the combination of courses by the colleges, however, there is rather more discussion now than there used to be. With the internal inter-collegiate

and external examiner system and the workload content of course units being specified there is, moreover, a great deal of control in terms of academic standards, despite the variations in weighting from college to college in terms of the year of study and the importance attached to written and practical work. The circulation of inter-collegiate examiners encourages a great deal more cooperation and mutual understanding than the previous system although there are still large discrepancies between departments in terms of the number of visiting examiners. In terms of feedback to the students the new system enables him to know the grading of his individual course units but not how this may affect his final placing, but this might be seen as an uneasy compromise between the old style finals and the new style continuous assessment. In terms of choice of courses restriction of choice in the first year has been found to allow more choice in the second and third year although there are difficulties for students who want to take more than one main subject. Difficulties in forming stable peer groups is another problem associated with the new system. It is not clear how far students do in fact prefer greater choice to constant working groups.

From the staff point of view it is easier under the current system for courses to be dropped when particular staff leave but not clear how far student choice can then be maintained by allowing students to take courses in other colleges, but inter-departmental cooperation within a college should be easier. Some might see, however, that the traditional departments are now more accounting than academic units. Even if it is admitted that the system makes it easier to fit the course to the needs of the individual student the problem is raised whether the University can now set forth what it regards as fundamental to a subject and which anyone graduating in it should know and understand, and ensure that these requirements are met.

Professor Billett's contribution raised serious doubts about the system in terms of engineering. He said that in general he was very much in favour of a course unit system for the potential flexibility which it provides but engineering is intended to lead towards a Chartered Engineering status so possibilities for choice were limited. Within these constraints, however, the school based special regulations allowed an immense flexibility and there was no centralised University control putting course structure into a straight-jacket. Experience over the years has suggested that there is less flexibility with the new system than with the old and colleges which have stayed outside the system are glad they still work with the Special Regulations. Course units in subjects outside the main field of engineering were very much more under the control

of engineers under the old system, but under the new course unit system much of this is lost. 'In the context of the engineering profession it is far more important that the overall course structure should be seen by the body of professional engineers in the University than that the syllabus and structure of a particular half-course unit should have satisfied the regulations of the University as interpretated by a Board of Studies which may or may not be competent in the field'.

Another problem lies in the difficulty of staff of the parent department in forming a balanced judgement of the overall performance of a final-year student. Professor Billett felt that this may not be simply a question of learning how to work the new system and on the whole he felt that 'we have got the mechanics of the system wrong and I, for one, would be happy to see my own faculty return to Special Regulations'.

Good administration is obviously essential in implementing a new course unit system in a large university and contributions from administrators from Senate House and University College looked at some of the problems which had arisen.

The early work of the administration was in helping to draft and re-draft the regulations and then to provide a summary of the 250 pages of the regulations and reducing the numerous special instructions to examiners to a single page. Notes of guidance were soon needed for the summaries but the more crucial work centred around the problem of how the Senate as the degree-giving body was to be notified of candidates' achievements and be assured that those registered for the new degree with its startling flexibility and range of courses had satisfied the requirements for the award.

A mechanised system was set up but the key to the success of the scheme as a whole lay in the maintenance of broadly comparable evaluation of courses. It was felt that this was one area where the administrator has come to play an important role in alerting those responsible for the degree system to obvious anomalies and possible dangers. 'It is only the relevant faculty officer at Senate House who sees all the course proposals for all subjects for all schools within his purview'. It was not up to administrators alone to spot discrepancies in valuation of courses but very few reports by visiting examiners

on undervalued or overvalued courses have been received by the Academic Registrar. Direct reports to schools may have been sufficient but it was felt that 'remarkable differences in practice as between subjects in relation to both the use of inter-collegiate visiting examiners and the selection and allocation of external examiners continues to be observed and some of these practices would seem to weaken the effectiveness of the visiting examiner in relation to the crucial role envisaged for him in the maintenance of parity of workloads and of standards of a new degree'. He commented, too, as did Professor Chapman, on the wide differences between marking schemes of different colleges and weightings given to first, second and third-year courses - and in the number of course units which candidates are required to pass before proceeding to the second or third year. He felt there was some concern about lowering the standards for the weakest candidates who could 'eventually clock up some sort of degree by repeating individual course unit examinations'. He did not want to plead for 'a return to centralised syllabuses or boards of examiners' nor did he want to 'centralise vetting of course proposals'. "The message is that conflicting anomalies in procedures can do serious harm to the standing of the system, with all its advantages, if left unrectified". He felt the whole scheme could be brought into disrepute if there were too many disparities in approach to basic problems.

The contribution from University College was in the form of 18 questions posed about the curriculum, courses, examining, inter-collegiate teaching and comprehensive papers.

Questions about the curriculum concerned the sub-jectivity of the combination of courses to form a 'coherent curriculum' where departmental faculty tutors only are involved. What criteria should be used? Are safeguards needed? Are regulations needed requiring a core curriculum? How much of a programme should be devoted to options? Is the grouping of existing courses to form new single or combined fields of study for the purpose of attracting applications through UCCA justified? The field of studies is advertised through UCCA but decided by examiners, is this an anomaly?

Concerning courses the rarity of boards of studies refusal to approve a course proposal raises the question of the usefulness of submitting them. Who decides who are the relevant boards of studies to see a particular course proposal? If a course unit equates to one final paper and on average a BA finalist takes 9 or 10 papers and an average course unit candidate takes 12 units have we got the definition of a course unit right? Other questions concern the communication between teaching departments and administration on the context of students' programmes. Corrections, correspondence of students' courses with examinations, late transfers, initial registering for more than 4 course units, the number of students needed in order to run a course and fringe teaching from predominantly traditional departments could all cause problems.

On examining questions were raised about the need to set question papers for late semester courses almost before the course has begun, the sessional spread of examining - should it be encouraged or discouraged? Exam timetabling and inter-collegiate courses raised other problems but perhaps more important is the question of comprehensive papers, 'has something been lost in terms of thinking through a particular problem in the light of broad-based background knowledge by too great a concentration on the examining of narrow course unit syllabuses? Is the philosophic and reflective content of courses tending to disappear? Does this matter?'

The paper ends with the question whether or not a course unit system where subjects have a substantial core curriculum and this is accompanied by closely controlled options actually conform to course unit principles. Should they in fact have remained in the traditional pattern?

Accompanying the administrative reports are tables of statistics. They are concerned with the operation of the system in over 50 subjects.

Cooperation in Course Teams at the Open University

John Mason

I have compiled these notes in an attempt to provide a succinct but sufficiently realistic impression of course team life, so that I can go on and make what I hope are useful observations for others wishing to embark on a co-operative venture. My main point is that the word co-operation (in the sense of co-operation) is a very high ideal - and that the word interaction is probably more appropriate to describe our situation.

I shall start by sketching the basic activities of a course team, and then indicate the major constraints which make our teams act as they do. Working in teams can be very frustrating and draining, but it can also be most rewarding and exhilarating, and my intention is to share both sides with you. There are many aspects of team work which could be elaborated, such as the psychological roles, the stages of course production and so on; but I have chosen to concentrate on one of our most persistent problems:

'Effective commenting on a colleague's draft'.

I have singled out this topic because it must necessarily arise in any co-operative venture, and to a large extent our inability to solve it at the Open University is holding us back from greater co-operation. I shall conclude with a rough Balance Sheet of costs and benefits which indicates my belief that despite (or perhaps even because of) the trials and tribulations, constructive interaction in a co-operative vein is well worth the effort.

1 Course Team Activities

Open University courses are mainly written on paper, magnetic tape and records - for students studying at home. Styles vary tremendously, from attempts to communicate the flavours of a lecture or tutorial, to traditional academic textbook approaches. Whether a course is written down or delivered verbally is not too significant as far as co-operation is concerned. Both writing and talking are individual acts with little room for co-operation. But the steps leading up to these acts have enormous potential for co-operation, and this is where OU courses tend to differ from most traditional courses. Each lecture equivalent (students are intended to study about 10 hours per week for 32 weeks for one credit towards the six credit general degree or eight credit honours) involves us in hundreds of hours of preparation time. A good deal of this is due to the medium of print which requires great care and precision, unlike lecturing where changes can be made at any time. Even so, we put a lot of time and energy into selecting and elaborating the ideas in the course (although not as much as some of us would like!). Add to this the advance planning needed for TV programmes, and it is obvious that no individual is likely to be expert at all the tasks. The course team is born!

In the following chart, please bear in mind that there are wide variations between individual course teams, and I am not trying to be complete.

Team	*Major Activities*
Chairman	Responsible for budget and production on time; runs meetings, allocates tasks, interfaces with administration.
Academic Specialists Good Expositors not always the same people!	Generate new approaches, new syntheses; write and rewrite texts; check accuracy; proof read; comment.
Consultants (non OU)	Usually subject specialists who write sections of texts for us.
Educational Technologists	Keep teaching strategies alive and the writers' feet on the ground; advise on assessment, testing, feedback.

Course Assistants	Research organisational details; help with illustrations; keep team going.
Editor	Responsible for getting final product to and from printer; often the only person to have a grasp of the whole course.
TV producers	True educational technologists
Technicians	Make models, carry out tests etc in scientific disciplines
Critical Readers (OU and non OU)	Check drafts for teaching strategy, accuracy, timings, etc.
Staff Tutors	Responsible for regional organisation of part time tutorial staff; often closest to students.

2 Course Team Constraints

There are three major constraints on a course team - budget, deadlines and human nature. Each course team has its own budget which limits the extent of home experimental kits, the use of full colour printing, the use of audio tapes and records, or what ever other bright ideas the team comes up with. The other two constraints are much more interesting!

From the outline of a team's activities you can see the potential for co-operation both inside the team, and also with the various service departments - the design studio, recording studio, administration, production control, library, .. With all the potential you could be forgiven for forming a picture something like the following:

TV producers reading draft texts; TV programmes developing hand in hand with texts and forming an integral part of the teaching strategy;

Educational technologists influencing authors regarding strategy, style of presentation, the use of exercises and examples, all based on practical experience and research data;

Consultants writing in an appropriate style to specified length as a result of their intimate knowledge of course team wishes;

Editors gently altering a few commas to improve style, and picking out the niggling errors that confuse students, having fully participated in the development of course themes, philosophy, content and strategy;

Critical readers making frequent and useful comments on drafts;

Academics with a true understanding of student difficulties carefully considering every word of explanation; meeting frequently to discuss course themes etc, to trade insights and to contribute to each other's drafts;

The final product being a co-operative effort with individual contributions subordinated to the whole.

HOWEVER reading, commenting and reading comments take time and energy
AND team members are human.

As a result the actual working of a team is rarely like this picture. We are very far from the ideal, but even our halting steps in this direction have borne fruit, as our published courses testify. Of necessity there is a tremendous amount of interaction. Discussions (especially in the formative stages) are lively and wide ranging. Frustration may be felt when a deeply held conviction does not sway the team on some issue, and constant exposure to critical comment at all stages of course development can be wearing, but these are part of team work. However, once the team settles down to producing teaching material, the human factor seems to dominate - drafts are often read hastily or not read at all, comments are sparse, and individual authors concentrate attention on their own contribution. This is largely due to the constraints of deadlines. Consider:

Working backwards from the very tight mailing schedules (for we send thousands of different packages to 50,000 students):
through printing time,
through at least two, usually three proofs,
through editing time,
through time to draw, check, redraw and recheck diagrams,
through rewriting on the basis of comments,
through collating comments,
through critical reading time,
through writing/reproducing time;

all of this for each of 32 student-weeks work, and you have only just reached the point at which a course team changes gear from incubation to birth! You can see that even a three year time schedule is very tight. Large course teams tend to suffer from lack of communication or excessive paper and small ones from too much to be done too quickly.

The schedules for course production are complex and confining, yet they are probably the single most important force for producing the quality we do. They force the academic, ever reluctant to be decisive, into the world of compromises and deadlines. Approached constructively, these schedules really permit the academic to reach a standard usually reserved for scholarly works. Once forced to work to the maxim 'it's finished on the day of the deadline so let go of it!' a new freedom and quality becomes possible.

3 Team Work

One way to think about a course team is to compare it to a sheepdog trial. As the judges and audience look on, the shepherd directs his dog to move the sheep across the field and into the pen as quickly as possible. It is a very delicate process for with one wrong move the sheep may scatter. In the world of the course team, project control acts as the judge, setting and maintaining deadlines, while (later) students and other academics look on as audience. The course team chairman as shepherd wants to get the course produced but he has a very indirect contact with the authors whose eyes are constantly on the ideas (the sheep). Course content has a nasty habit of suddenly expanding ('You can't leave this out!') or falling apart ('it seemed like a good idea!') rather in the way that sheep may suddenly bolt.

Probably most chairmen have at some time wished that they had as much control over their authors as shepherds do with their dogs. But good sheep dogs are trained, and good shepherds have had long experience. If a course team is to function effectively, then there must at least be a relation of mutual respect between chairman and authors. Looked at in this way the following roles seem necessary:

- organiser to keep team moving, bringing up problems for decision
- visionaries to produce new ideas

- methodical people concerned about details
- people to retain a grasp of the whole course (the team rarely does - but if they can't how can the student?)
- a balance between dynamic and passive personalities

Such elementary considerations as verbally expressed appreciation of jobs done amidst the plethora of critical comment; the need for a common basis of communication often absent in interdisciplinary and interfaculty courses; and the importance of a shared vision or aim to provide a sense of value and commitment; these must all be fostered if the team is to act like a team and co-operatively produce the course rather than putting it together in bits and pieces like an assembly line.

You can perhaps begin now to see why I would describe our course teams as interactive rather than co-operative. To me, true co-operation would consist of co-operation on six fronts:

Creative generating of new ideas and deeper understanding of subject matter;

Interaction (as at present) between course team members in the early stages of course planning;

Course team identity, which gives the course a unity and wholeness, maintained for the life of the course (at present we start well...);

Concern for the production of the teaching materials maintained right through to the final proofs (and not just focussed on your own area);

Discipline in working to deadlines (creativity always seems to be accompanied by some need or pressure, yet we often try to shirk these);

Individuals advancing in subject expertise, teaching strategies, and the ability to work with others and under pressure.

We manage the first two, and start well on the third, but the remaining three tend not to be tackled co-operatively, and often this is the source of tensions.

4 Commenting on Drafts

The heart of any co-operative venture of course preparation is the giving and receiving of specific comments. Talking is easy, but making constructive suggestions on a draft is not! Let me say immediately that I have no solutions, only indications, yet

I am so convinced of the importance of this deceptively simple problem that I wish to draw your attention to it.

When any course is first conceived, the ideas are in a great state of flux. There are many possibilities, most of which will ultimately be abandoned. Yet somehow these must be discussed and commented on. The trouble is that they are usually stated in a very few technical words, which are wide open to misinterpretation. For example, in our earliest teams, a first draft of a course consisted of chapter titles, section headings and the odd introduction. People argued over these at length. Then someone wrote a second draft putting in more detail. Screams from other team members indicated that they had understood something completely different! The use of objectives, and references to other texts does little to ameliorate this situation. Once you start filling in all the details, the rough outline goes by the board. The other end of the spectrum is a completely detailed draft. Apart from the time taken to produce this, and the reluctance to spend a lot of time on a draft that may be chucked out in total, a detailed draft has a confining effect on readers. If a reader is unhappy about the overall strategy or development, it is hard to know where to start commenting. Consequently many readers comment on the detail without challenging or considering the overall shape. Once ideas are expounded in detail they seem to have an inherent resistance to major changes - except by rejecting the lot and starting again.

In order to find the middle ground, both reader and author require discipline. It must be made clear what level of detail is to be discussed - is it general teaching strategy, format, development of ideas, kind of examples, accuracy of details or style? All of these are important, but arise at different stages. A fairly co-operative course development must first of all have some way of distinguishing these.

Perhaps the most surprising observation to come from my experience of course teams is that by and large, academics seem to have no language in which to communicate about teaching except the technical language of the subject matter. This may explain why it is that most discussions about teaching end up discussing some specific example and become immersed in the content of the example, forgetting

the teaching. Certainly there is widespread rejection of education jargon - but it is not replaced! Yet academics are the first to point out how necessary words are for the communication of their ideas!

Having recognised this strange situation, my approach is to find some way to talk about the various aspects of teaching by beginning to question my own experience:

'What is my teaching strategy in a given passage? What do I expect a student to do, to experience, to see? Is it clear to the student what is expected? and so on'

But what constitutes a useful answer to these questions is not at all clear. We are up against the language problem again. Something sharper is needed which will permit people to share insights and discuss such questions meaningfully. This leads me to the idea of a framework.

A framework acts like a pair of binoculars, to permit my attention to focus on details of my experience with a new sharpness. One example that I currently find useful is based on Bruner's three modes of representation of experience: Enactive, Ikonic and Symbolic. I use these terms to refer to three levels of conceptual understanding:

Enactive	able to manipulate specific instances of a concept, but not the concept itself.
Ikonic	having a sense of the concept, often not in verbal form but perhaps accompanied by some mental image.
Symbolic	having a grasp of the concept as a thing, usually expressed symbolically.

As we encounter and come to grips with a concept we pass through these levels in an endless spiral. Symbolic representation is not the goal, but only a stage. When the symbols have become sufficiently meaningful to us, they are part of our manipulative armoury, making them tools for the enactive exploration of deeper levels of understanding. The really significant moments in learning are the transitions from level to level for this is where people get stuck. Thus I find the terms useful for bringing to my attention what suggestions I can make to individual students.

I also find the terms useful in reading, writing and commenting. In the past I have tussled with the conflict between theory first and examples later or examples first and theory later. But these merely produce heated argument with little light. I have found recently in reading drafts that I can sensibly comment that in a certain passage the student is expected to pass too quickly to the symbolic level; that it would be much improved if some ikonic image can be offered so that the symbols have meaning for the student. In another case, the student can only be expected to have reached the symbolic stage of expression but has not yet gained mastery over the symbols (to have reached the enactive stage with them) so the introduction of further concepts is too quick.

Of course any framework which expresses the same or similar ideas will serve. The features of a good framework are that once it begins to be used, it becomes richer and more meaningful. When it is dead it must be discarded. Many people are frightened of such frameworks because they fear being pushed into seeing things only in one way, possibly not even accurately. What they forget is that they already have their own frameworks (in a poor state of repair usually) working below the level of consciousness. By being explicit, and testing it against experience (without demanding that it do the impossible) a framework comes out into the open where it *can* be discarded. When a framework is shared between people it can provide the equivalent of a shared base of experience which is the foundation stone of true communication. It then becomes possible to discuss details of teaching which were impossible before - both because they were only vaguely recognised and because there were no precise words. To do this requires openness and a wish to co-operate - but so does any real communication. Having (we hope) established some real basis for giving comments, there remains only the problem of receiving them. Invariably we find that they are mutually contradictory and wide ranging. Even if an ideal state of communication existed, there is every likelihood of disagreement over a draft. In our case the conflicts are usually resolved by the person willing to do the work having the final say. I can listen to comments and opinions, but in the final analysis, if I am doing the re-writing, then the people whom I respect will have the most influence. People are probably not aware when they make comments of how one particular remark

on a draft can send the author into great soul searching, or conversely, can nullify all of that person's comments. In short, the giving and receiving of comments severely tests the degree of co-operation of a team.

5 Costs and Benefits

Finally, let me summarise my impressions of life in course teams by an idiosyncratic 'balance sheet' of the costs and benefits of working in course teams at the OU:

Costs

Time - over a period of 2-3 years, it takes many people to produce one course - each additional person involved means another person to be imbued with the course philosophy etc and another viewpoint to be taken into account at each stage.

Money - large capital costs for preparation of materials (This is because of our glossy printed style. We reach thousands of students each year, all at home, so there are no student accommodation overheads).

Energy - Interacting (co-operating) takes both time and energy requiring listening and reading as well as talking and writing. Creativity under pressure is exhausting. Critical comments from colleagues are frustrating. Yet when a course is in full production I get far more ideas, both course centred and research centred, than at times of low pressure.

Finality - once a text is printed or a TV programme made it is expensive to tinker. It will remain (in our case) for 6 to 8 years. Further, these media seem to have an inbuilt demand for precision and accuracy.

Benefits

Quality - course content is carefully researched, providing a scope, breadth and depth of preparation unmatched in most lecture courses.

Personal Growth - there is an opportunity for people to work together toward a greater whole, and thus to grow themselves both in content specialities and as teachers. They will (hopefully) be exposed to alternative teaching style, and strategies - freed (forced) to consider wider issues of course design, teaching strategy etc without the day to day pressure of lectures.

Students - get a broader more carefully polished presentation than is usually the case.

Tasks - can be divided amongst the team to match expertise. (In a lecture course, usually one man researches, prepares, delivers and assesses.)

In conclusion, I heartily recommend attempts at co-operative production of teaching material, because it offers the possibility of both personal and subject matter insights not available to individuals working alone. One might think that a course assembled by a committee might resemble the horse designed the same way - resulting in a camel! But if some measure of team work is achieved, the result, as Open University courses demonstrate, can resemble a space programme - no one person could achieve it alone, but there is a concomitant expense.

The Cooperative Use of Open University Materials

Gerald Normie

From the very beginning of its operations, the Open University has been keenly interested in the use by other educational institutions of the materials that it produces. Some of this interest arises because of the possibility of gaining extra income for our activities through the sale of television and radio programmes, course units and specially designed kits in science and technology.

Gaining extra income from commercial activities so that we can improve and expand services to our own students may in itself be considered a respectable and worthwhile objective for a university, but there were other reasons for the desire to see a wide use of our materials. The Vice-Chancellor, Sir Walter Perry, has recently said that "many of those who joined the staff of the Open University at the beginning were much less interested in the commercial possibilities of the material they were producing than in the altruistic notion that they could benefit people everywhere who had, for one reason or another, been deprived of the opportunity of education".[1]

Less altruistic but no less cogent is the natural desire of the academic to have a large audience for what he or she has to say. Yet another reason was that recognition of the academic quality of OU materials was particularly important in the early years when the University was establishing its reputation. If imitation is the sincerest form of flattery, and we have been pleased to have our imitators in various parts of the world, then the purchase at commercial prices of our educational output must be considered a scarcely less sincere and perhaps more tangible form of appreciation.

Use of Open University materials by other educational bodies does not however necessarily imply co-operation with the University and the purpose of this paper is to look at instances where some measure of co-operative use can be discerned. What though do we mean by co-operation? The Open University has always been willing to work with other institutions all over the world but has never laid down a closely worked out set of objectives. It has approached co-operative ventures in an open ended flexible way and we have proceeded by building up differing models of working with others. From a growing number of initiatives in this country and abroad I have selected five examples, three from the undergraduate programme and two from the post-experience area, to illustrate the diversity of approach. It may then be possible to delineate some of the parameters of co-operation, to identify some of the problems and limitations and to speculate on possibilities for the future.

The first of these examples is S299, a second level course in genetics which was made available to students in 1976. This so far is the only instance of co-operation on a large scale with other universities in this country in the production of course materials. The initial reason for seeking co-operation, as indeed is the case with the next two examples, was an essentially practical one; we needed a course in genetics to achieve a balanced profile of courses in science and at that time we had no geneticists on the Open University full-time academic staff. An approach to Nuffield produced funds to enable members of the teaching staff of four other universities to spend a couple of years working with OU academics to produce a second level half credit course which was designed "to cover the whole range of modern genetics, from its molecular to its population and human aspects". [2]

The Universities involved in this project together with the OU were Birmingham, Hull, Sussex and York. In addition the Nuffield Foundation set up a consultative committee of eminent geneticists to help in planning the overall shape of the course. At this point we may perhaps speculate on the motives which lay behind a venture of this kind. The OU ones are fairly clear: filling of a gap which we could not cope with alone, and more positively the chance to work on a meaningful and continuous basis with academics from conventional universities. We could hope for new ideas and fresh enthusiasms and these

indeed were supplied in good measure, but the course would not depart from the usual OU path; it would follow the by now well established pattern of course units, audio-visual material and tutor and computer marked assignments. What, however, did the other universities hope to gain? Certainly it was a chance for members of their staff to work with an innovative institution like the Open University on a course which attempted for the first time in a British university to cover the whole range of genetics. They would hope to come back with new ideas and fresh methods which would invigorate the teaching of their subject when they returned. There is some evidence that this in fact happened, a gain which matched in some measure the benefit which the OU members of the course team received.

But what about their students; how did they intend to use the course material back at their own institutions? Here the picture is less clear but it seems fairly certain that at the start it was realised that although the complete course would be of value to OU students only parts of it would be used by students at conventional universities taking courses in genetics. For instance the introductory parts were too basic for students of this kind and the comprehensive coverage of the field was not required by all the participating universities. The course was designed therefore to break up into discrete blocks which could be used as necessary. Could this be achieved without affecting the unity of the course? The general consensus seems to have been yes, but perhaps more important than what is used is the question of how exactly it is used? Open University courses operate in a very particular way: they are integrated multi media packages designed for use at a distance by the independent part-time adult learner. Would a course designed with such specific objectives be suitable for younger full-time students working in a conventional university atmosphere characterised by a considerable amount of face to face tuition and practical laboratory experience? Some students appear to have benefited considerably in that they realised that the questions presented to them in the carefully structured material were of the kind they should be asking themselves as their own course proceeded. However, there is perhaps understandably a certain reluctance in the conventional university undergraduate to use to the fullest extent independent learning material when there is ready access to academics on the campus. How can this reluctance

be overcome, to what extent should it be overcome? Do very differing academic situations put some limitation on the amount of true co-operation which can be achieved?

Some final points about S299 concern co-operation within the course team. How would academics from outside the OU fit in to our system? How well and how quickly would they operate within the course team structure? From a purely academic point of view, it seems that this worked reasonably well, and those from outside soon found themselves in every sense of the word, full participating members of the course team. Nevertheless, they did not perhaps realise until much later on, the implications of some of the organisational and logistical decisions which had to be taken early on about the course; they therefore found themselves committed to decisions about format and structure, at what for them, was too early a stage. A comment from one of the academics outside the OU was that looking back it might have been a useful exercise to begin with drafting a fairly small part of one of the units and taking it all the way through its stages. This, it is thought, would have given an earlier insight into our methods of working.

The amount of time for which the academics from outside were seconded from their respective universities was two years and one term - this, in the event, proved inadequate to get the course fully off the ground and a period of three years would have been more suitable.

There are obviously then lessons to be learned from the production of S299, but all concerned are unanimous that it was worthwhile, exciting and stimulating. It provides several very useful lessons that can be learned in respect of future co-operative ventures of this kind.

The next example is a third-level course in Arts, A307 - a new OU course on drama, which is being presented to students for the first time this year. One difficulty emerged early in the planning of the course. It was considered desirable to have television programmes of double the usual length and to use actors of the highest calibre; when costed out, this proved an expensive undertaking and it was soon realised that on the amount of money in the budget, it would only be possible to produce seven television programmes instead of the sixteen which were required.

We therefore looked around for another institution which might be prepared to put money into the course in return for the right to use the materials. An inquiry in the United States soon elicited interest from the Miami-Dade Community College in Florida. This institution had already secured the rights to the BBC Bronowski programmes on the Ascent of Man and had been very successful in using and marketing them together with a supporting package devised at the College.

It should be remembered that despite the enormous amount of audio-visual materials available in higher education in the United States, the quality is not always particularly high. In 1974, the Massachusetts state college system commissioned a team of consultants to prepare an inventory of the audio-visual materials available in higher education at that time. The conclusion of the consultants was: "These materials vary tremendously in quality and comprehensiveness; in general, their level of sophistication is much lower than that of the British Open University". However, the report did cite two exceptions to its generally negative conclusions about existing materials in the United States; one of them consisted of courses on psychology and cultural anthropology, produced by the Coast Community College District in California, and the other one was a course on "Man and the Environment" produced by Miami-Dade - the costs, however, of these courses were very considerable indeed. The cost of the course in cultural anthropology produced by the Coast Community College District was 33,000 dollars per hour; the production included sending crews to Africa and Asia to film foreign cultures. The Miami-Dade course cost 1.1 million dollars with each half-hour segment costing between 22,000 dollars and 55,000 dollars.

The proposal therefore made a lot of sense to the people at Miami-Dade: they could secure materials of very high quality for a reasonable outlay. For the Open University, it made all the difference between producing a comprehensive course of high quality and limping along with a partial or second-best course. In the event, an agreement was concluded by which Miami-Dade put sufficient money into the course to enable the course team to produce sixteen programmes. In fact, eighteen were eventually produced, as owing to copyright difficulties, it was not possible to show two of the originally planned programmes on American television. Two others were

therefore made as replacements but as these were programmes that the course team would like to have made in any case, they added to the value of the finished course.

In the United States Miami-Dade will be producing their own study modules, to go with the television programme. These will be of a somewhat lower academic level of difficulty and although there will be no formal co-operation with the OU in their production, nevertheless, there has been consultation.

My third example from the undergraduate programme illustrates yet another facet of co-operation - S354 is a third level half credit science course on Space and Time which is at present under production. Once again it was decided to see what help might be available from outside the University and negotiations were started with the University of California on possible co-operation. The interest of the American University was not only in using the finished products for their students but also in co-operating in course production, particularly in the creation of television material. At the time of writing, ideas have not been finalised but the intention is to have the differing needs of both universities in mind when the programmes are being made - these will therefore be deliberate 'over shooting' and the Californians will use the material for university extension work as well as on their regular programmes for internal students. Flexibility of use is being built into the production right at the start and the resulting television programmes will be able to be used singly or in groups. The American academics will produce several versions of their own written materials for a variety of uses, one example being 'breadth courses' for students of the liberal arts which will provide some scientific background for the non-scientists who have very little mathematical background. The result of co-operation of this sort will however produce benefits which go beyond the obvious economies in course production. Three of the programmes will deal with astronomy and in California there are world famous facilities for this type of work. The Open University academics could of course have obtained access to these facilities without formal co-operation with the American University on course production but once such a link has been established, there is little doubt that the intimate knowledge which the Californians have of institutions on their home territory and their wealth of contacts will

prove of immense benefit to the Open University course team.

The last two examples of co-operation concern the post experience area. The report of the Open University Committee on Continuing Education, 'The Venables Report', recommends a considerable expansion of this area of the University's work and already there have been innovative ventures on a co-operative basis. One is with the Women's Institutes in Norfolk. Here a pilot project is underway to see how successfully Open University materials originally produced for the undergraduate programme can be adapted for use in general non-vocational adult education without altering the texts of the original course units. Three short courses have been arranged: in Water Conservation, Design in Everyday Life and in Industrial Archaeology. In each case, the course has been made up from a series of units produced by the Open University linked to a text book and supported by television films. Specially designed study guides and study programmes have been prepared for the Women's Institutes by the Open University Post Experience Unit and the timetable of the ten week courses consists of four discussion group meetings interspersed with periods of home study as advised in the study programme. An evaluation of this experiment is being currently undertaken but even now there is a good indication that the project is successful and it has certainly been entered into by the participants with great enthusiasm.

Finally, there is a course being produced on child abuse by the Post Experience Unit in co-operation with Newcastle Polytechnic and the Northern Region of the Open University. Here the 'package' is in three parts and the first two parts, a core text which will be self-instruction material, and an accompanying reader and source book will be on sale to the general public. In addition, there will be a teaching resource pack for the use of educational institutions who may wish to incorporate the course into their own specialist teaching programme.

The variety of examples of co-operation referred to above (and there are many more examples, eg collaboration in the production of mathematics and science material with the Free University of Iran and the adaptation of the Social Science Foundation Course D101 in conjunction with staff of the Empire State College, New York) makes it difficult to discern the

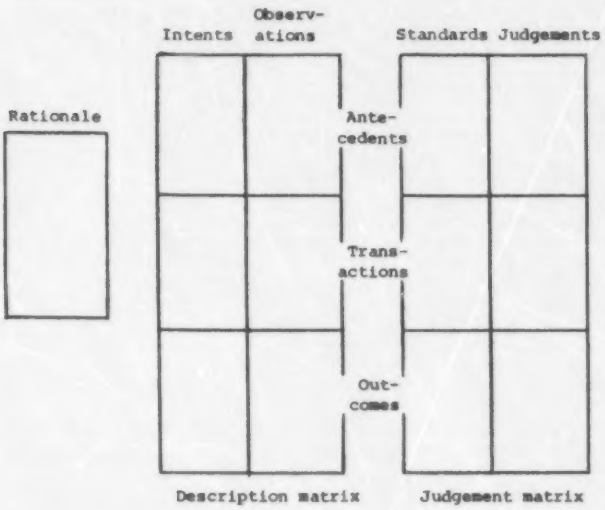
common elements which lie behind these various ventures. And indeed as I have said earlier the Open University has approached co-operation in a spirit of diversity and flexibility. Is it possible however to attempt to devise a structural framework within which such initiatives can be examined and discussed and which will further their development? Some help can perhaps be gained from the techniques of curriculum evaluation and in particular from the model put forward by Robert State of the University of Illinois in his well known paper 'The Countenance of Educational Evaluation'[3] and since developed in subsequent writings.[4] Stake feels that in evaluating data, three bodies of information should be tapped: antecedents, transactions and outcomes. An antecedent he defines as "any condition existing prior to teaching and learning which may relate to outcomes". Transactions he defines as "the countless encounters of students with teacher, student with student, author with reader . . . - the succession of engagements which comprise the process of education."

Outcomes are considered in a wide context, "not only those that are evident or even existent, as learning sessions end but .. applications .. which may not be available for measurement until long after .. in short, outcomes are the consequences of educating". Stake drew up matrices, in which these three elements are considered in the context of 'intents', 'observations', 'standards' and 'judgements' - 'what educators intend, what observers perceive, what patrons generally expect, and what judges value the immediate programme to be'.

Figure 1 is a very much abbreviated and consequently inadequate representation of Stake's views, but we shall only be concerned with ideas which arise from consideration of his description matrix. It is also necessary to look briefly at the model he then devises for processing his descriptive data.

"For any one educational program" he maintains, "there are two principal ways of processing descriptive evaluation data: finding the contingencies among antecedents, transactions and outcomes and finding the congruence between intents and observations". The format for processing is shown in diagrammatic form by Stake in Figure 2.

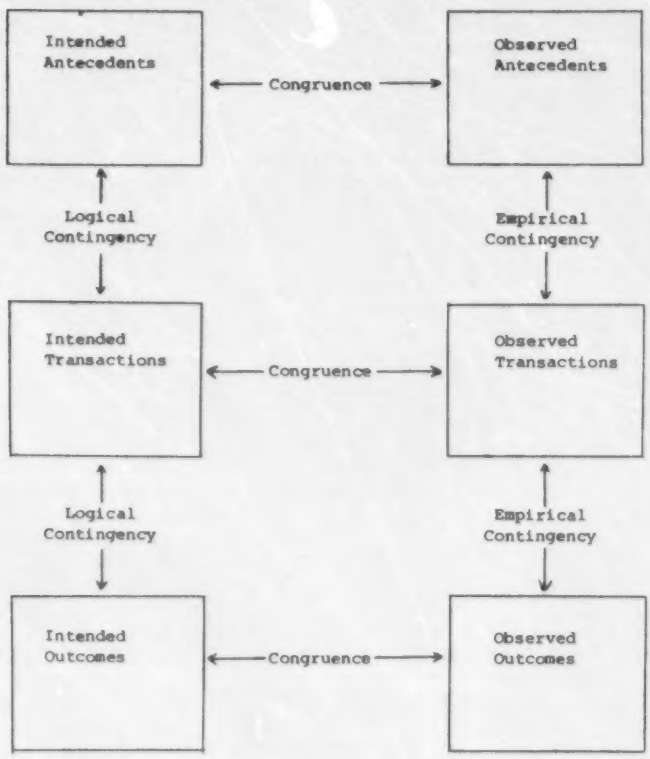
Figure 1



(Note: The rationale indicates the 'philosophic background and basic purposes of the program')

In Figure 2 Stake says that data are congruent if what was intended actually happens. "To be fully congruent the intended antecedents, transactions and outcomes would have to come to pass (this seldom happens - and often should not)". He points out however that congruence "does not indicate that outcomes are reliable or valid, but that what was intended did occur".

Figure 2: A representation of the processing of descriptive data



Stake's methodology provides insights for tackling the problem of analysing the co-operative projects with which the Open University will increasingly be concerned. An examination is required by both parties to the intended agreement of:

1 The condition existing before co-operation takes place.
2 The resources which each party will be able to bring to the venture.
3 The conditions which will exist during the creation of academic materials.
4 Expected student uses of materials.
5 Possible variations of normative use.
6 Future adaptations.

With regard to the first of these elements, the pre-existing conditions, it should be pointed out that many people feel they know a lot about the Open University without fully realising what a complex structure it is. From the University's point of view we need to find out in detail the organisation, resources, and educational aspirations of each institution with which we negotiate. When the next stages are reached and the actual details of the agreement are worked out considerable attention is needed and seemingly mundane minutiae need to be spelled out carefully.

However precise the negotiations may be it is a truism, but a necessary one, to point out that things rarely proceed just as planned; the unexpected often happens and as Stake implies, sometimes fruitfully. While the material is being prepared therefore 'formative evaluation' needs constantly to take place so that necessary alterations to the structure of the project can be made. This of course can only happen if flexibility is built into the venture from the start and this is not always easy even in the most amicable of partnerships when contractual arrangements involving finance have to be made.

As far as expected student use is concerned the Open University has always been fairly clear about its own objectives as they have usually related to the furtherance of its undergraduate programme, where matters are arranged according to a set pattern. The continuing education area will undoubtedly be more flexible and there may also be variations of projects in different parts of the country. Patterns of use in other institutions are of course their own concern, but it is conceivable that the

co-operatively produced material may be presented outside the Open University in contexts which the University may not have foreseen.

Adaptations present more severe problems. To what extent will the originators of academic material allow their work to be altered and what safeguards should the University seek to ensure that adaptations are acceptable, particularly when it is made clear that there has been an OU involvement? There is also the question of the possible adaptation by the OU of the material of other educational organisations. When academics of any educational institution produce material primarily for their own students how far can they, should they, be aware of other possible needs?

In the examples of co-operation discussed earlier the OU has been a substantial if not the main participator. There will undoubtedly be occasions in the future when the University will play a minor role in co-operative schemes of course production. What are the 'contingencies' inherent in such situations? They may well mean for example that television and radio programmes are not used. Assessment procedures will be different from those usually employed in OU courses. There may however be instances when one or two Open University academics are participating in a project, contributing their specialist academic expertise, but using none of the techniques with which the University has come to be associated. Can such a project really be described as one in which the Open University has taken part as distinct from individual members of its staff? A negative answer does not devalue work of this kind. Open University staff will undoubtedly benefit personally and may well feed back some of what they have gained into future OU course production, but here in some sense we reach the limits of co-operation. The Open University as an institution has a whole range of varied skills to offer and the needs of its students, as further levels and new types of courses are developed, are beginning to differ widely. And yet the Open University flavour, derived from its involvement with the needs of the independent learner, is distinctive. This flavour should in some way be present in the antecedents and the transactions of a truly co-operative venture in which the University is taking part and should therefore logically be apparent in the outcomes.

Perhaps a more positive term than 'limits' of co-operation would be 'indicators' for co-operation. Where it is considered possible that Open University ideas and methods, in however different a context, would be beneficial to an institution planning a project, then here is an indication for the University to begin negotiations for a co-operative scheme. Conversely where it seems that a project, however far removed from our normal interests, might benefit the University's own students then again there are indications for the sharing of resources. What is then needed, as I have suggested, is a rigorous analysis of the intended antecedents, transactions and outcomes to be undertaken by both institutions. An examination of logical contingencies, the consequences which can reasonably be expected to ensue, is also necessary.

Such close scrutiny at the outset need not be inhibiting. As the first Chancellor of the Open University, Lord Crowther, said in his inaugural address in 1969 "We are open to ideas" and sometimes the unexpected consequence may be the one which in the end produces the most benefit. We are above all concerned in creating new opportunities. In the words of Lord Crowther "Whenever there is an unprovided need for higher education, supplementing the existing provision, there is our constituency". Increasingly it is evident that our full contribution to the needs of the community can only be made in co-operation with others. And it is to the constructive partnerships of the future that we look forward as we emerge from our first stages of development.

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Across the Binary Line: Establishing a Joint Postgraduate Diploma in a Polytechnic and two Universities

Chris Parkin

Abstract

In 1975 the City University, the Hatfield Polytechnic and the University of Surrey began a collaborative venture to develop a Postgraduate Diploma in Teaching and Learning in Higher Education, to be validated, taught and awarded jointly by the three institutions. The process of development of this scheme by staff of the Centre for Educational Technology (City), the Education Group (Hatfield), and the Institute for Educational Technology (Surrey) is described from the viewpoint of a member of the course development team. Some appraisal of the nature of the collaboration is given where possible.

Origin and Context of the Development

The origin of this development can be traced to a number of factors. In recent years there has been an increasing emphasis given to competence in teaching and matters directly related to teaching by the polytechnics and universities. During a visit to Melbourne in 1971 Professor Elton, Head of the Institute for Educational Technology at the University of Surrey noted the development of a part time course leading to a postgraduate diploma to meet the needs of higher education teachers from a large conurbation. Professor Elton's institute had for a number of years run intensive short courses covering broad areas of teaching and learning in higher education for staff from many institutions.[1] The idea of a development similar to the course at Monash University, centred in the South-East of England was attractive. The City University had also, since the founding of its Centre for Educational Technology, been offering short courses on organisational aspects of higher education for staff from British and overseas institutions.[2] Both City

and Surrey Universities had received financial help from the Universities Grants Committee who in the earlier 1970s were able to give some support towards the development of university staff training programmes. However due to the deteriorating national economic position a joint application by the two Universities for financial help towards the development of a long course leading to a post-graduate qualification was shelved. Alternative lines of development were therefore considered, and the idea of co-operation with an institution in the public sector of higher education was explored as prospective course members would be employed in polytechnics as well as in universities. In this way a number of institutions would be involved in jointly providing the necessary resources and expertise. The polytechnics were now well established and on this side of the binary line there was perhaps an even greater concern for the provision of staff and course development services, exemplified by the growth of SCEDSIP (Standing Conference on Educational Development Services in Polytechnics). For a number of reasons, including geographical considerations and the existing provision for further education teachers in the region, an approach was made to The Hatfield Polytechnic, 20 miles North of London. The Hatfield Polytechnic was almost unique at that time in having an in-service course for newly appointed academic staff with little or no previous teaching experience in higher education requiring their attendance for one day per week throughout one academic year. This in-service course stems from similar provision during the 1960s for staff of the Hatfield College of Technology and other Hertfordshire colleges.

The initial suggestion that the possibility of a jointly taught and validated course should be explored was well received. Thus in April 1975, a small Planning Group of staff representing those areas of the three institutions concerned with providing support for the improvement of the quality of teaching and learning in their institutions was set up. Subsequent key stages in the development are summarised chronologically in the Table.

Aims and Content of the Postgraduate Diploma Course

The principal aim of the collaboration was agreed by the Planning Group as being 'to develop a course

for experienced academic staff in higher education who wish to extend their knowledge and understanding of problems of teaching and learning in higher education'. The Planning Group recognised that course members would expect beneficial changes in their own skills and attitudes. They also considered that course members would require to learn how to bring about such changes in others. Members of the Planning Group and subsequently the whole Course Team brought together a range of differing experience and career patterns in higher education. Their diverse experience of teaching, learning, and research led to their identification that the course should be designed to meet the following perceived needs of potential course members: a comprehensive and critical appraisal of h wn teaching and learning methods and their uses including applications of theories of learning; an understanding of the roles of academic staff as teachers, managers, counsellors, researchers; an understanding of selection and admission procedures, and the effect of teaching and learning processes on student attitudes and expectations; an understanding of the organisational structure of higher education and its institutions; and the ability to act more efficiently in administrative and committee work, and in student and staff selection procedures. Further development work by the Course Team led to a course comprising the following main areas of study:

Two areas comprising a study theme of the Curriculum -'teaching/learning methods and skills' and 'the curriculum and its development'; two areas comprising a study theme of People and Organisation -'organisation' and 'personal aspects of professional development'.

A selection of intended outcomes for course members and an outline summary of the subject matter of the course is given as an Appendix.

(The course requires part time study - one day a week plus four 2/3 day residential periods - for five terms.)

Authority to Proceed with the Development

A decision to go ahead with the development required approval of the three institutions. Figure 1 shows the various principal committees, internal to the respective institutions which discussed the proposal at appropriate stages of its development. Initial commitments in principle were given by the Senates

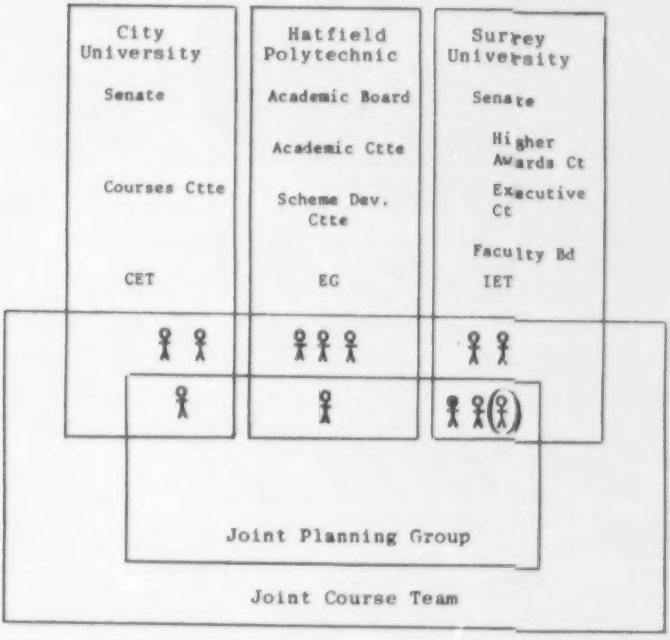
of the two Universities and by the Academic Board of the Polytechnic. Gaining approval to explore the possibility of this development further does not appear to have been difficult. After this initial encouragement the formal procedures required by the Polytechnic and the Universities were substantially different in that the Polytechnic needed to undertake external consultations. And, herein, lies a reality of the binary line.

Constraints External to the Institutions

Before a new long course can be provided by a polytechnic approval for resources to be devoted to that course, and authority to admit students, must be obtained from the Regional Staff Inspector (RSI) of the Department of Education and Science in consultation with the Regional Advisory Council (RAC). This is in accordance with FE Regulations of 1975. The Polytechnic judged that it could not go ahead with this trans-binary development without at least consulting these bodies. Advance notice of the proposed development was also given to the County Education Officers and to the Council for National Academic Awards, for initially it was conceived within the Polytechnic that CNAA validation would be sought.

Discussions with the RAC/RSI took place at a time when the outcome of a report by the Advisory Committee on the Supply and Training of Teachers on the training of teachers for further education was awaited. The RAC could not recommend approval without giving careful consideration to resource implications. They were also concerned to know whether the course would compete with the existing provision for FE teacher training and how it related to the training of staff of institutions of higher education other than polytechnics and universities. For reasons of this kind negotiations take longer than enthusiastic members of a course development team might wish. However the Polytechnic as an equal partner in this development was able to argue that: no course of a similar kind was available in the region; the Universities working in collaboration were not subject to similar regulations and there was a strong desire that the existence of the binary line should not frustrate the development; the Polytechnic would in fact contribute one-third only of the total resources to the course; the course was not, in fact, concerned with initial teacher training but with educational development

Figure 1: Principal Committees in the Validation Process and the Membership of the Planning Group and the Course Team



Note:

Administrative Co-ordinator

Academic Co-ordinator

CET *Centre for Educational Technology*
EG *Education Group*
IET *Institute for Educational Technology*

for experienced teachers; and, the scheme had the support in principle of the senior academic bodies of the three contributing institutions,

Approval was received from the RSI in June 1976 for the Polytechnic to enrol members into this course leading to a joint award of the three institutions. Thus the trans-binary collaboration had been recognised.

Academic Validation by the Universities

The Universities each took the proposals through their respective committee structures (Figure 1). At the University of Surrey this involved the Faculty Board (Humanities), the 'Higher Awards' and 'Executive' sub-committees of Senate - the former concerned in particular with academic standards, the latter with resources - and finally Senate itself. In the early stages, since there were other developments within the University which included educational components, the Senate set up a specific sub-committee to look at a number of proposals of which this was one. This committee enabled concerns which were being voiced by psychologists and sociologists, regarding the contributions from these disciplines which might be appropriate, to be examined in more detail and proved to be an asset in assisting the subsequent acceptance of the proposed development by the Senate.

The City University had previously been involved in a collaboration across the binary line and it appears that there were no exceptional problems in gaining validation. In the first instance, after appropriate preliminary discussions, an approval was made direct to the Senate. Subsequently most of the validation process took place at the Courses Committee.

The informally constituted Planning Group was recognised by the Senates of the Universities, and that of Surrey agreed to the transfer of a member of staff in one of the subject departments from some of his existing commitments, to act as Administrative Co-ordinator of the development. In subsequently giving final validation to the joint scheme the University Senates were particularly concerned with the issue of academic standards and ensuring the assessment scheme was appropriate. It is interesting to note, by way of example, that to this end the provision for oral examination of the course members was introduced into the scheme.

Academic Validation by the Polytechnic

The Hatfield Polytechnic has developed, during the last decade, expertise in the submission of academic schemes to an external body, the CNAA. As part of this process new developments involve deliberation of a Scheme Development Committee constituted for the purpose and internal approval by the Academic Committee, and the submission of rather detailed course documentation. Although the Academic Committee did not require the course to be initially approved by a Board of School of the Polytechnic as is usual for internal schemes, a Polytechnic Scheme Development Committee was formally constituted, the Assistant Director (Academic) joining the Hatfield members of the joint Course Team. The proposals of the joint Course Team were put to a meeting of this Committee open to all members of the Polytechnic to attend. The Polytechnic also appointed a Scheme Assessor, in accordance with its usual practice, to advise the Scheme Development Committee and independently make recommendations to the Academic Committee as to whether the scheme should be approved. Most discussion concerned the general administration and running of the scheme rather than the curriculum content. During this process it became apparent that the scheme proposals, already in a fairly detailed state of documentation, following the work of the Course Team should be presented for final internal polytechnic validation in a format similar to that normally adopted in the case of typically detailed external submissions to CNAA. It is relevant to note that this format was accepted by the City/Hatfield/Surrey (CHS) Course Team as the definitive document of the course and subsequently submitted by the Universities to their Committees. This was a substantially more detailed document than usually put forward within the Universities, but it appears that the explicit nature helped the validation process. Whatever the shortcomings of any particular detailed document, it is usually at least an outward measure of substantial thought, time and deliberation which underlies its preparation.

The Planning Group and the Course Team

The Planning Group took a number of key decisions in its early meetings which were to facilitate the early progress of the development. Although perhaps in retrospect these may seem rather obvious the fact that they were taken quickly illustrates the purposefulness of the group. Firstly, each institution was

required to identify available resources and personnel who would be able to contribute to the development and teaching of the course; secondly, there was agreement that staff from the three institutions should attend each others' existing related short courses; thirdly to arrange a residential working weekend for all members of the Course Team. It was also agreed that the course should be taught one day each week for five terms at the City University site, with four 2/3 day residential periods at each of the institutions.

At its second meeting the Planning Group set up small working parties comprising identified course team members to clarify objectives and select course content in areas of their expertise. The working parties met to develop the course in the areas of curriculum development, organisation, and teaching and learning methods. They were required to identify the likely expectations of course members and hence determine broad areas of content and more specific aims. Following further meetings of the Planning Group and Course Team the work of these groups was brought together at the residential weekend. In a venue, external to the three institutions, which provided a congenial environment, a course structure and content was synthesised from the various proposals. Individual team members were then identified as 'prime movers' responsible for further development of components of the course. Tasks were allocated to all members of the team. The prime movers were charged with producing written statements of intended outcomes, content including reading lists, teaching and learning methods, duration of the component and use of time, assessment methods, resources required - both human and material and links between the component of the course in question and other parts of the course. As part of the programme of the weekend, a member of each institution presented a learning experience for the course team - a sample of some aspect of their eventual contribution to the course.

An important outcome of the weekend was the identification of the role of Academic Co-ordinator whose function was to undertake subsequent consultative and editorial work necessary to produce from the planning work of the 'prime movers' a coherent document for future appraisal by the Course Team and Planning Group. The Academic Co-ordinator gave attention, for example, to ensuring that in

any one day the activities for course members would be balanced in terms of a suitable variation of learning experiences.

Appraisal of the Development Process

Factors Facilitating the Innovation

A course is not fully established until at least one group of course members have successfully gained the award intended, and summative evaluation is possible. Nevertheless the development of the CHS Postgraduate Diploma represents a significant achievement in collaboration. The initial aim to be able to offer to staff of institutions of higher education a jointly validated postgraduate qualification leading to an award jointly made by the collaborating institutions has been achieved. Whilst an initial and important relationship had been established previously by contributing staff of the two Universities which clearly facilitated further collaboration, relationships with the Polytechnic and between almost all members of the Course Team began ab initio.

It is interesting to consider factors which facilitated this development. Firstly, there was little in the way of divergence of motive of the three collaborating groups. Few issues emerged where substantial value conflicts arose. All three groups were relatively small units within their institution; all believed they stood to gain from the collaboration. On the one hand the University groups were able to extend the resources available by working with other personnel, and on the other hand the Polytechnic group was a newly formed group of staff defining new roles. The value of the exercise was assumed and not in question. Few power conflicts were evident. Certainly individuals were concerned to see that their perceptions of what constituted an appropriate curriculum were recognised. Shared conceptual frameworks had to be developed and differences in the use of language understood. The residential weekend did much to foster trust between those involved.

Secondly, the proposal was made at a time when the climate for such a development was favourable. As stated earlier, there has been a growing recognition of the need for courses for the professional development of teachers in higher education. There have also been expressions of the need for co-operation across the binary line, for example by the

Chairman of the University Grants Committee, in order that available resources might be used advantageously.

Thirdly, the innovation did not introduce substantial costs, travelling expenses to attend meetings, correspondence, etc. being squeezed from existing budgets - an example of 'slack innovation' - there was enough slack within the system (of the three institutions) to make this possible.

Fourthly, a contributing feature to the success of the venture was the development of good communication between members of the Course Team and with other bodies as necessary. This was facilitated from the start by the identification of an Administrative Co-ordinator who minuted meetings, kept the participants to deadlines, ensured decisions were communicated to all involved, monitored the progress of sub-groups. The establishment of the role of Academic Co-ordinator reinforced the mechanisms for good communication. In drafting the curriculum he drew to the attention of the Planning Group those areas in which decisions were required to expedite the development work.

The Trans-binary Affair

The binary line is characterised by the differing systems of national administration of the universities on the one hand and of the polytechnics and other colleges on the other. Does this binary line present a real barrier to collaboration? As one member of the course team said, on reviewing the situation, "it certainly presents a psychological barrier, but once the administrative difficulties are overcome the problems evaporate." Whereas the Polytechnic need to obtain RAC/DES approval required considerable time and energy being devoted to diligently undertaking appropriate consultations, there was no corresponding obligation upon the Universities. Considerable patience was therefore required by them, whilst negotiations were in progress. With respect to course development in higher education - involving either changes in structure or teaching and learning methods - the binary line has recently been described as "resting more on the rhetoric of academic politicians than on the reality of day to day problems." [3] The internal structures and practices of the Polytechnic and the Universities although different did not provide fundamentally different problems in obtaining validation. Perhaps it should be noted that the collaborating institutions were not

as disparate in their history as they might have been. Prior to 1956 the two universities were, before becoming Colleges of Advanced Technology, in fact titled polytechnics - Northampton Polytechnic and Battersea Polytechnic respectively.

Joint Validation and a Joint Award

The implications of a jointly awarded scheme are for one set of standards and for one validating body. In this respect responsibility to ensure satisfactory standards have been devolved to the members of the Course Team, working together in collaboration with the external examiner whose appointment has been approved by the senior academic bodies of all three institutions. Nevertheless the joint Examination Board will be accountable to each of these three bodies, each in turn approving the recommended awards before the awards to course members are made.

It has been the practice of The Hatfield Polytechnic for all long postgraduate and graduate courses to be validated by the CNAA. This scheme represents an exception. A collaborative scheme inevitably involves a sharing of authority and the universities preferred collaborating with a polytechnic acting autonomously than with a polytechnic seeking validation. Universities guard their own autonomy jealously. Whilst being willing to share the validation process to the extent of one-third with the Polytechnic, due to the integral joint development of the course, validation by CNAA would have implied validation of the University contribution thus challenging their independence and academic integrity. The award sought by the Universities was a joint one with the Polytechnic and not with CNAA. In agreeing to this joint validation and award, it may not be insignificant that the academic committees of the Polytechnic had not long before been discussing a CNAA paper 'Partnership in Validation'. The climate had been one in which the idea of a greater degree of freedom in certain subject areas had been discussed. Certainly there was sufficient opinion in the Polytechnic at this time to support the Universities preference, and so the possibility of a collaboration in which t he Polytechnic sought CNAA validation was not put to the test, and the question of CNAA validation quietly receeded.

Participation and Collaboration

The membership of the Planning Group comprised the most senior members of each of the three units

contributing from the three institutions together with the Administrative and Academic Co-ordinator; together they were key personnel in decision making and planning. The extent of consultation with course team members, additional to the circulated minutes of meetings, depended upon the style of the individual members of the Planning Group. The Group in no way restricted the direction of the development of the curriculum. In both the Course Team and in the Planning Group contributions were made freely - as one course team member has put it "no one man was running the show". Most of the course team had at some point before or during the early stages of development attended 'Meetings Workshops' at City University. It is of course difficult to evaluate whether this or indeed other past experiences had any direct bearing on the good working relationships which were developed, but it would seem important that members of a course development team should make opportunity to study the nature of the process in which they are engaged.

All the members of the Planning Group and Course Team, described now as the 'innovative group', were working outside the established 'sets' within their institution. The external location of an innovative group in this way has been identified by Professor Joselin, when reviewing case studies in innovation in higher education, [4] as giving rise to minimum threats particularly when the objectives of the group are also defined externally, as is the case in this innovation. Members of an innovative group release energy in each other, indeed they seem to gain energy from each other. Perhaps a term such as synergic innovation might be appropriate to describe a situation in which a number of parties collaborate in innovation to bring about a change which otherwise working separately would not be possible. The Course Team certainly gained energy from their collaboration - which was sufficient to overcome conflict in aspects of the development which although not always easy to identify are a part of any proposed change. The concept of synergism can be developed further, in particular with respect to the issue of authority. Joselin discusses the interesting question of what kind of authority enables changes to be brought about and describes a kind of authority which can effect major changes and which arises through two-way communication of a horizontal kind as between equals. This mode of authority has been described as anthropological or 'personalistic' - the authority which operates when

one person acts with the intention of liberating personal authority in another. [4] An innovative group is then one in which members of the group liberate autonomous authoritative activities in others, a process which might be described as giving synergic authority.

The value of collaboration is illustrative of the conclusions drawn by Joselin who quotes Bennis, "that rationality is always an ingredient of authority but not necessarily of power". The innovative group in seeking approval for its proposals through the university and polytechnic committees and in external consultation relied mainly on rational argument. Both in discussion within the course team and in consultation with other parties, logical and reasoned argument appears to have been the principal mode of persuading others to accept the new ideas. Thus we can observe at one time carefully reasoned arguments being put to the RAC, and at another agreement being reached to divide the fees to be received from course members equally between the three institutions. The group could not bring to bear power-coercive strategies, and had no base on which to call upon psychological or economic strategies to persuade the various bodies that the innovation should be adopted. Essentially the innovative group gained its authority from the process of the development work which it undertook itself.

Envoi

The collaboration has resulted in the City University, The Hatfield Polytechnic and The University of Surrey offering jointly a Postgraduate Diploma in Teaching and Learning in Higher Education, to be taught and awarded by the three institutions. The course content, briefly outlined in the Appendix, is concerned with two themes - 'the Curriculum' and 'the People' in higher education. Emphasis will be placed on the links between them for it is not meaningful to examine the curriculum - the aims and content, the teaching, learning assessment and evaluation methods, without developing a greater understanding of the people - the students, the teachers, their institutions and their society.

No doubt there have been unintended outcomes, from the collaboration, as well as intended outcomes. Following validation of the course the Planning Group gave further attention to matters of course

advertisement, fees, registration of course members etc. However the intended starting date (January 1977) was delayed until January 1978. It appears that the group underestimated in their closeness to the task, and in their enthusiasm, the extent of the advance notice required by prospective course members before being able to make a commitment to a Postgraduate Diploma course. Perhaps the most certain beneficial unintended outcome has been the sharing of ideas which can be put into practice by course team members within their own institutions in other contexts.

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I would like to acknowledge with thanks the numerous points drawn to my attention by members of the Course Team in helping me to form my own perceptions of this development. In particular my thanks are due to the helpful support I have received from Leo Evans (City), Tony Tribe (Hatfield) and Professor Lewis Elton (Surrey).

Appendix: A Postgraduate Diploma in Teaching and Learning in Higher Education

A Selection of Intended Outcomes of the Course:

Teaching and Learning Methods and Skills

Course members will develop their ability to:

prepare, conduct and assess small group learning;
evaluate classroom processes;
provide materials appropriate for independent learning;
organise learning in order to provide appropriate feedback to teachers and students;
select appropriate media for learning, being aware of advantages and disadvantages and disadvantages.

Curriculum and its Development

understand criteria on which to construct curricula;
appraise the contribution of their own specialism in relation to the purposes of higher education;
recognise unintended as well as intended outcomes;
define and systematically analyse problems in existing courses and course development;
select alternative teaching/learning situations from a greater awareness of developments in other institutions;
value the working together in course teams;
understand strategies for effecting changes in education at course, curriculum and institutional level.

Organisation

understand the current situation in the provision of higher education in the United Kingdom;
analyse the structure of the institution in which they work;
determine management objectives in their institution;
understand and apply management concepts and organisational processes;
plan, organise and maintain a personal office system;
recruit, supervise and develop technician, clerical and administrative staff;
operate budgetary and accounting systems with a knowledge of legal obligations of the teacher;
organise, participate in, chair and report on meetings.

Personal Aspects of Professional Development

analyse their role in relation to their conception of it and of their actual performance;
recognise when non-academic factors affect academic performance of students and the role of the lecturer in counselling;
organise staff development programmes for their colleagues;
cope with dual role strains, e.g. change agent and as teacher.

Summary of Subject Matter

Teaching and Learning Methods and Skills	*The Curriculum and its Development*
Analysis of classroom processes Selection and use of educational media Small group learning Student use of the library Laboratory work Independent learning Student learning processes	Course aims and Course design Content selection Assessment of learning Curriculum Analysis and Evaluation Strategies for Curriculum change Directions of Curriculum change
Organisation	*Personal Aspects of Professional Development*
Higher Education in the United Kingdom Management of: Person and Office Management Financial and Legal Aspects Student selection procedures	The Teacher's Role in Higher Education Student Counselling Training and helping others

Residential Workshops (2/3 days) will be centred on the following themes:

1 Problems that teachers face
2 Analysis of the teacher's role
3 Meetings
4 Interviewing

Freedom to Learn?
Problems of Cooperation and Choice in Independent Study

Paul Ramsden

Introduction

Most teachers in higher education would agree that an important goal of their work is to encourage students to become self-motivating, autonomous learners with a capacity for 'critical' or 'post-conventional' thinking (see, for example, Entwistle and Percy 1970, 1973; Dressel and Thompson 1973). Doubts have been raised about the effectiveness of conventional course structures in helping students to achieve these aims. The emphasis of courses on the students' role as an apprentice to a discipline, on early specialisation, defined syllabuses, required reading, structured lecture programmes, and examinations testing recall, has been questioned; a radical critique of these methods of learning and all that they imply has been offered in the form of independent study.

In spite of the attractions of the concepts of open education and integrated education to educational philosophers and humanistic psychologists - from Rousseau through Dewey to Bruner, Rogers and Maslow - these notions have made little progress in higher education in this country. And yet they would seem to be singularly appropriate to the aim of encouraging critical thinking and to a group of learners who already have much experience of the educational process. This paper will look at one experiment in independent study: the DipHE programme at North East London Polytechnic. I shall define what I mean by 'Independent Study' and then go on to outline the structure of the course. I will look at student and staff perceptions of the course after its first year of operation in 1975. I shall then summarise the critical problem areas and offer some tentative suggestions for successful programmes of

independent study in higher education.

What is Independent Study?

A good deal has been written on this subject (see, for example, Dressel and Thompson 1973; Hatch and Richards 1965; Nuffield 1975). All I shall do here is to define independent study for the purposes of this paper. Independent study is *not* complete freedom for a student to study anything he pleases in any way he likes. This would not only be undesirable; it is impossible so long as there are any agreed aims for higher education - and there are a few. The desultory pursuit of scraps of subject matter without any coherent end in sight is not independent study. On the other hand, neither is independence to be equated with innovations such as individualised instruction, modular course structures, programmed learning, or project work as part of a more conventional course structure. It may be helpful to identify stages of independence in terms of student control over learning:

Pace - choice to work at one's own pace and learn at times and places one chooses (Example: Keller Plan)

Choice - the student can choose to work or not work at a course or at a part of a course (Example: Modular course structures)

Method - the student chooses the learning method he finds most suitable

Content - the student chooses what he learns

(Adapted from Boud and Bridge 1974)

Independent study encompasses all of these stages; for my purposes, an independent study course is one in which a student can gain an undergraduate diploma or a first degree wholly or very substantially in this way. Independent study is a highly responsible pursuit of self-defined objectives by a student choosing his own methods and working at his own pace. It is both a means and an end in higher education.

The NELP DipHE: Background

The James Report recommended that courses leading to a qualification after two years, encompassing a general education together with a specialist element,

and incorporating flexible methods and curricula, should be instituted. The School for Independent Study at NELP was set up in 1974 to run the Polytechnic's programmes leading to the DipHE. In effect, the course is a device through which students create their own programmes of higher education. Responsibility for planning the programme of study and deciding objectives and the means of achieving them rests with the student. There is no syllabus or course content in the usual sense. There are no set assignments which all students complete. There is an emphasis on adaptation to change in a democratic society, the use of real life learning situations, and the formulation and testing of problems. (Dewey 1916; Popper 1959.) The importance of transferable skills and of knowledge which is not based on the problems of disciplines is stressed. In its emphasis on weakened boundaries between subjects, on supra-disciplinary concepts, and on student control over the way knowledge is transmitted, the course approaches Bernstein's characterisation of the integrated knowledge code in higher education (Bernstein 1971).

There were 72 students in the first intake and in 1974/5 there were seven full time academic staff attached to the School. In the first six weeks of the student's course, a planning period during which students examined their own educational needs and decided on their course objectives took place. Thereafter, students worked in groups of two to twenty members on projects which they devised themselves. During the first year, students were divided into seminar groups of twelve and to each of these groups was attached one of the full time lecturers in the School. This staff member acted as a personal adviser to each of his students and also supervised the group projects. In addition to group work, students also followed a special interest, chosen and worked on individually. A specialist tutor, usually from another polytechnic faculty supervised the student in this part of his studies. Students were assessed in terms of the extent to which they achieved objectives stated by them at the beginning of their programmes and validated by their tutors and by an external validating board. The basis of assessment was (a) a piece of independent work based on a student's individual special interest study and (b) the student's performance in a group 'set situation' at the end of the course, in which students were required to formulate a

problem, to propose solutions, and to show how they would be tested.

This course structure differs considerably from that of the only other independent study programme in this country - the BA programme in Lancaster's School of Independent Studies. At Lancaster, for example, students begin their undergraduate career in the same way as other students at the University: by following three Part I courses in different departments during their first year. Only then may they take independent studies, either as a major or as a minor. Their work is normally by individual study only.

The NELP DipHE: Staff and Student Perceptions

Many observers have investigated the NELP DipHE. Here I will concentrate on one of the evaluation studies I undertook for the programme in 1975. I shall try to give a flavour of staff and student reactions to the course at the end of its first year of operation, and to draw from these comments the principal difficulties which were encountered.

This particular study used a methodology of interviews, discussions, and observation. All the tutors were interviewed, using a unstructured approach and ensuring that several questions were raised. Discussions were held with students from each of the central studies groups; the students were volunteers and were non-randomly chosen. A similarly unstructured approach was used. The interviews and discussions were complemented by observation of both formal and informal interactions between students and staff and by a limited amount of participation in the discussion of group projects in two of the groups.

1 Tutors' Comments: The Problem of Consensus on Aims

There was general agreement among the tutors about the importance of the aim of developing independence, on a student-centred approach to learning, on student choice, and on transferable and flexible skills and their relevance to a rapidly changing society. All the tutors were in agreement, so far as the DipHE was concerned, with a reduction in the importance attached to professional and subject based knowledge and a corresponding increase in the importance of the concepts of problem-definition and solving.

It was in the interpretations of these general aims that substantial differences emerged between the tutors. Most of the staff were concerned about what they perceived to be a lack of agreement amongst themselves. Several tutors felt worried that the original ideals of the programme were being compromised, but for different reasons. To be more precise, they approached the problem of devaluing of ideals from two different directions. One group interpreted the general aims of the programme in terms which echo the ideas of Carl Rogers and Abraham Maslow. The student-centred approach was seen as concerned with the total development of the person; competence was defined as coming to terms with oneself and rejecting habitual patterns of behaviour. One of these tutors commented:

"We need to examine student motivation; people can do things if they believe in themselves. Their attitude is what comes first, then the skills... education is too orientated to intellectual criticism"

Another tutor from this group characterised the traditional higher education course as a 'self-justifying game' in which a minority of students were benefited at the expense of the majority; achievement was restricted because of competition which was seen by this teacher to be inimical also to growth and feeling.

The second group of tutors was troubled about the possibility of anti-intellectualism and an over-reaction to traditional methods. Personal development was not thought to be a valid end *in itself* for the DipHE:

"The approach which says that the DipHE is an opportunity for personal growth and development is dangerous. One can grow and develop in a pub or a prison. Students should be encouraged to develop abilities to deal with things outside themselves. I don't want the whole thing to move into being an encounter group"

These tutors were worried about the external credibility of the course and the problems of self-indulgence by students in unsophisticated, haphazard 'growing' which was thought to be an irresponsible and confusing objective. These contradictory emphases on creativity v. critical ability and personal v. academic development held by the two groups of teachers undoubtedly influenced their perceptions of the problems of students. For the

first group, difficulties stemmed from a tendency to impose too many controls on students; to do their best work, students must have no constraint on the way they pursue or choose their interests. The second group thought that problems arose from too much freedom and too little context; here the view was that students would work best when confined within a fairly definite pattern.

The interviews revealed many differences between tutors in their attitudes to student assessment. There were differences in the importance of student self-assessment. One tutor felt that any form of qualifying assessment was bound to be uni-dimensional and that all the most important effects of higher education were impossible to assess. A less extreme view, held by another tutor, was that self-assessment and peer assessment were the most crucial things, although assessment for purposes of future courses and jobs was a necessary evil which could be separated from 'real' self-assessment. Another tutor stressed the importance of external standards and publicly testable criteria for failure:

"If a course is good, nobody should fail it - but not because that's my philosophy, but because everyone should reach the standard. One can't have no assessment and then grant diplomas. It's no use saying 'good' to everything... In the real world, when people don't do well they get thrown out or they don't succeed... It's doing a disservice to students to say that one should offer a diploma to someone who has vaguely 'grown' as a person"

Similar differences emerged when staff were asked to discuss the role of a tutor in the DipHE. Some staff spoke of the need to provide structure to students; others feared being too authoritarian. Some emphasised the job of the tutor as a critic of students' work; others rejected this role.

2 Students' Comments: The Problem of Co-operation

A view expressed in all of the discussions was that students were experiencing a sense of isolation and unsureness because their work did not relate to other students' work. This was thought to be true especially of special interest studies but also to a considerable extent of central studies projects. Several students compared the DipHE to a more conventional course in this respect: the structure of the curriculum in the latter sort of course was

felt to provide ground for discussion and communication among students, leading to a sense of 'togetherness':

"There's no one to talk about what you've done on this course... (on other sorts of courses) if you've all got to write an essay or something, you can talk about it; if you've all been to a lecture, you can talk about it and exchange ideas".

"One thing is, there's no cohesion because there's no common aim whatsoever. It's very difficult to get people together to talk about anything because they think it's not relevant to what they're doing or I think 'It's not relevant to what I'm doing'... Therefore it's a very lonely type of course - this can be very depressing. You get no feedback on anything; you can't judge your work against anyone else's"

The remark was often made that students' critical comments and feelings of dissatisfaction should not be taken to indicate that they wanted to exchange the freedom of choice given by the DipHE for the controls of a more conventional course; but some sort of compromise was desired. A number of students wanted a more stimulating environment for learning in which tutors acted as more than resources. Here is one of these students:

"I don't think that they have really put enough thought into creating learning situations. I think they thought: 'It's a good idea, student-centred education: we'll apply it to higher education'. But it's not a very stimulating environment. Staff seem to expect students to generate everything... they seem to have thought that students would do things like coming to them and asking for series of lectures. They ought to take more initiatives themselves"

The problem of lack of cohesion and common aims was at its most acute in the views expressed by students about the level or standard of work required in the DipHE. Many respondents said that it was hard to know the standards needed, whether one's own work was at the same level as that of other students, and whether what external agencies thought was satisfactory would be in any way related to what their tutors accepted. These problems added to students' feelings of unsureness and confusion. Several said that the apparently different standards set in different tutor groups increased the uncertainty.

Some students related this problem to a lack of feedback from their central studies and special interest tutors on their work. Students felt unable to test out their ideas on other people to assess their adequacy; the environment which would make self-assessment easy was not present.

Students were very conscious of differences between central studies tutors and groups, and this added to feelings of confusion about the aims of the course, to the sense of lack of cohesion, and to the perceived difficulties over expected standards of work. Worries were expressed about the fact that students in different groups were getting different ideas about the way they should be working and thinking, and that this might lead to problems in assessment later. One difference apparent to students was the amount of stress laid on academic or personal development by tutors:

"The Group next door are completely different. We're trying to go towards an academic standard, to produce a final product. Their main interest is just trying to work in a cohesive group. That's a basic rift in the course".

A related problem brought out in the discussions was that of communication. Several students were critical of the amount of time given by special interest tutors. There was a feeling expressed that the other faculties in the Polytechnic were unable or unwilling to understand the DipHE, and that central studies tutors needed to maintain closer relationships with special interest tutors.

The Critical Areas

Objectives - confusion, isolation, and a lack of commitment by some students to their work arose because of a failure to provide an explicit structure in which students could place themselves. Paradoxically, the more 'free' the course, and the fewer the formal requirements for fulfilling syllabus needs, the greater is the importance of underlying agreement on the purpose of an educational programme and the means by which the purposes are to be achieved. A discipline-based course provides structure for its participants because of its subject matter. Solidarity in independent study courses probably has to be achieved through the deliberate creation - to put it in Durkheimian terms - of an integrating *conscience collective*. Disagreements between

tutors on fundamental issues concerning the programme, students' perceptions of these differences, and students' unsureness are all evidence of a weak basis for solidarity. Unclear links between knowledge and skill objectives and the idea of 'independence' are another aspect of it: it seemed that there were implicit or hidden objectives which students had to achieve quite apart from their own stated aims.

Assessment - Students' confusions about standards of work are related to unclear or hidden objectives, The association between qualifying and feedback assessment was also a source of difficulty, and was to some extent a result of differing definitions of the purposes of assessment and evaluation by different tutors. There was a lack of adequate feedback on students' performance in group work, with the consequence that many students lost faith in it as a way of learning. Assessment was not an easy task for tutors and external examiners, either: measuring the extent to which students had achieved their objectives, how far their work showed evidence of self-direction, and whether its standard was equivalent to second year university work, was problematic. The principal difficulty was the lack of comparability of students' work; how does one assess products which are answers to different questions? How do we allow for the fact that students begin from different starting points? Might not the fact that students decided their own objectives favour those with modest aims?

Dissatisfaction - A source of student dissatisfaction in higher education courses is incongruent definitions of course purposes by staff and students (Startup 1972; Entwistle & Percy 1973). Students' dissatisfaction has been traced to staff emphasis on theoretical ideas in lectures and students' perceptions of the rigid intellectual authority of the university. The DipHE explicitly mixes theoretical and commonsense ideas and the organisation of the courses stresses informal teaching and learning situations. *Prima facie* one would expect a greater sense of involvement of students than in some more conventional courses. The evidence of the staff and student interviews suggests two reasons why this may not be the case. First, there may be underlying differences between student and staff definitions which exist in addition to the explicitly defined agreement; second, apparent agreement

between students will be spurious to the extent that students perceive differences within the staff group and among themselves. Lack of agreement about what is to constitute a 'good' DipHE, for example, will not make for positive evaluation and to student involvement with the course. The consequence of the several confusions we have noted above was, for many students, the growth of apathy, passivity and doubt. Following Durkheim (1964) we may characterise their experience as anomic rather than integrated.

The Course and its Environment - Problems were encountered in effectively relating the programme to other courses and departments in the Polytechnic and to other staff and students. Students tended to see themselves as isolated from other faculties; there were strained relationships between some special interest tutors and their students; other faculties doubted the ability of DipHE diplomates to achieve honours degree standards in post-diploma work in particular disciplines. The political distance between the School and the rest of the polytechnic was to some extent created by the organisers of the programme themselves. There is little doubt that staff co-operation was made difficult because of the perceived threat to established academic disciplines which the course posed.

Requirements

The problems we have noted above are far from unique or, indeed, unexpected. Many are predicted by Bernstein's theoretical model of integrated knowledge codes. At an empirical level, similar difficulties have been identified in studies of free-schools in the USA and in forms of independent study in higher education (see, for example, Chesler 1973; Deal 1975; Dressel and Thompson 1973; Lewin 1976; Oldfield 1974; Shuter 1973). It is becoming clear from this evidence and from studies of the NELP experiment that courses of independent study may well succeed best with:

1 Clear statements of aims, staff agreement on those aims, and explicit statements of the relationships between general course aims and the specific objectives of students, including those objectives which are expected to be achieved by all students.

2 An open but definite structure to the course in which teachers' and students' roles are clearly stated and articulated with objectives; the

teacher must not be merely a 'resource' but an active associate - however paradoxical this may sound - of his students' learning. The student must recognise his responsibility to work co-operatively with his colleagues. For both students and teachers, the simple rule appears to be: the greater the independence, the greater the degree of co-operation.

3 Explicit criteria for assessment.

4 Accurate descriptions of the aims of the course and of the problems likely to be encountered by students, provided for prospective entrants before they decide to embark on the course.

5 Programmes of induction into independent study, emphasising basic skills of research method, library use, and data presentation. Continuing help with study skills as the course progresses.

6 The provision of many means by which students can evaluate their own work - such as pre-arranged meetings between groups of students to comment on each others' work.

7 Very probably, staff trained specifically in the most difficult skills of personal academic guidance, student counselling, and in the supervision of group project work.

Many questions nevertheless remain unanswered. It would be fatuous to conclude that the problems of independent study in higher education are easily resolvable. Can there really be a basis for agreement on aims outside established academic disciplines? What might it look like? What room is there for differing attitudes amongst students and staff in independent study courses? Might the sort of agreement needed lead to stricter control over student attitudes by teachers, and to assessment based on affective rather than cognitive change? How are independent study courses to negotiate with a hostile environment and what compromises are necessary?

Perhaps most importantly: what happens when students learn by independent study? We still know very little about the relationships between different learning environments, learning styles, and learning outcomes in higher education. Are independent study courses more appropriate to some learning styles than others? Does independent study favour

students who are at a certain stage of intellectual development (Perry 1968)? Can independent study encourage the development of some learning styles and strategies - such as the process of integrating diverse learning materials into coherent frameworks created by the learner himself?

Conclusions

This paper has concentrated on the difficulties experienced in achieving co-operation between students and staff and between the DipHE course and its environment. It would be quite wrong, however, to think that the course can be judged unsuccessful. On the contrary, given the difficulties which the course had to face in its first two years - no one had ever tried to run a similar programme in this country - its achievements are remarkable. Students have done high quality work; several external examiners have commented on the exceptionally high standards achieved by the best diplomates. Variety, imagination, and excitement have been said to be characteristics of their work. Of the 52 candidates assessed at the end of the 1975/6 session, 43 passed unconditionally and only three failed. The CNAA has now approved the School's submission for a BA by independent study and for a part time DipHE.

An aspect of the programme's approach which deserves special mention is its openness to comment and to criticism. Many observers have been encouraged to make comments on the programme and its organisers have taken careful note of these remarks. They have had the courage to admit that they have made mistakes and numerous changes to the course have been instituted, many of which follow the suggestions listed above. This self-monitoring orientation might well be usefully adopted by the organisers of more traditional higher education programmes.

The examination of the problems and processes of independent study focusses our attention on questions which lie at the heart of any discussion of higher education: how to integrate diverse learning approaches and objectives, how to reconcile competing needs for individual autonomy and for responsibility to the collectivity, how to encourage effective learning strategies. At the level of individual learning, we can see more clearly the need to study the process of non-trivial learning itself and the different ways of which students (and teachers) approach the cycle of analysis and

synthesis, of differentiation and integration (Chickering 1971), through which complex learning seems to proceed. At a more general level, we are led to reconsider the aims and purposes of higher education in a complex society which has not dissimilar problems of its own.

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Students, Choice and Problems

Ruth Deitch

My thesis is that we give our students no real choice and that we evade the consequent confusion by calling it a problem of identity.

I must emphasise that what I am going to say is a personal viewpoint. I am not an educationist, and I am not an academic. What I say is based on personal and professional experience, not on research or formal theory, neither of which I know very much about. Nevertheless, the whole question of choice making is one of my current soap-boxes, so I was delighted to be asked to talk to you about it.

I should start by giving you a brief background to the setting in which I work. I am the Senior Counsellor in the Student Advice Centre of one of the five ILEA Polytechnics. The structure on which the Advice Centre was built was created in 1971 and I took up post late in 1972; so we are now half-way through our fifth year. The SAC offers a welfare and professional counselling service to all members of the Polytechnic. There is a separate Careers Advice Service, so that most students who see their problem in terms of a career decision would not, at least initially, turn up in our office.

The Modular Degree Scheme, on our experience of which I am going to draw, is now in its fourth year. I do not think I need to say much to you about a Modular Degree Scheme. There is however built into the scheme a system of teacher/counsellors whose function is to guide the student along the most appropriate academic and study routes. Our referrals come partly from these members of staff and partly from the students directly - ie self-referrals and the recommendation of friends. I

shall say more about the proportion of referrals in a moment.

The SAC is, as I have said, if not in its infancy, then certainly at a pubertal stage, with new growths sprouting at all corners. We have kept certain statistical records from the beginning, but only as our work has expanded have we come to consider more closely the information we wish to record in order to help us assess the kind of problem which come to us, to identify areas where we should be more active, and to chart the progress of our impact on the institution in which we work. Thus the figures I wish to quote to you, (and there are very few of them), are based only on the period January 1976 to February 1977 and are therefore an indication of trends rather than evidence from which to draw conclusions.

Modular Degree students account for about one fifth of the full time students in the Polytechnic. MDS students account for about one third of the students visiting the SAC for advice of all kinds, except medical or accommodation. About a quarter of those who come are referred by staff, the rest are self-referrals (that is a slightly higher proportion of staff referrals than from other courses). About a third of those who come present with a problem of identity or choice confusion, (and I have included here those students with examination or study worries, since that is nearly always related to a 'what am I doing?' difficulty). About half of the rest usually move into talking about personal dilemmas after one or two sessions with a counsellor. (Again, these figures are a slightly higher proportion than for other courses, except the Politics and Government course, where the career aim is usually just as obscure as that of the MDS.)

Thus it would seem that a course such as the MDS exacerbates difficulties associated with career choice and identity confusions although I do not believe for one moment that it creates them. In my view the difficulties arise as a result of the inefficient and unrealistic way we bring up our children. The ability to make decisions is not born in us; the strength with which we carry them out may be partly innate, but the knowledge of how to arrive at them is not. It is a logical mental process with identifiable elements which has to be learnt, and if it is to be learnt in a construct-

ive and properly applicable way then it has to be consciously taught - by precept, by guided experiment, by explanation; beginning with simple practical alternatives and progressing over a period of years to complex moral and emotional issues.

To present a young person who has had little or no practice in making decisions with the question 'what do you want to do with your life?' (and there can be few questions more crucial,) is to project him, or her, into a state of confusion which can lead to a smoke screen of hyperactivity or an apathy near to paralysis. It is not that they don't know what they want to do with their lives, it is that they really do not know how to find out what they want to do. Furthermore, having pushed our young people into introspective confusion and, sometimes, panic, we say they are suffering from 'adolescent identity crisis' and either send them off for treatment, or pat them on the head and kindly tell them they'll grow out of it.

Consider the matter: how many parents actually involve a child in the decision making that regularly takes place in family life? - moving house, choosing schools, budgetting, changing jobs. The child may be asked what he would like, or whether he would like such and such. But that is simply taking his tastes into account - admirable but not educative. Then, having been carefully protected from ever having had to make any decision of any importance, is is suddenly asked to make one of the most vital decisions of all, which career to study for? This, mind you, when he is having to cope with almost as many firsts as has an infant, from using a launderette, through working out a study schedule and making his money last, to what is he going to do about his parents? Not to speak of what is for many the first opportunity for sexual experimentation and practical validation of their sexuality.

Being 19, or thereabouts, is a difficult state to be in, (not as difficult, in my recollection, as being 14, but difficult enough). The wonder is, not that so many of them come a cropper but that so many of them don't!

The school examination system is a constrictive one, where pupil choice of subject is virtually non-existent, being dictated by school curricula, university tradition, and government policy. When

I was 'choosing' my 'A' levels I was told that I should do English, at which I was good; that I couldn't do Geography, at which I was also good, because it was not acceptable as a subsidiary to English but that I should do History at which I was not good, because it was a 'literary' Arts subject; and French, at which I was not good, because the universities demanded a modern language. The result was that I took three years to get three 'A' levels, and ended up at university doing English, Archeology and French. I then had two more years of failure before I had enough gumption to challenge the system and start doing my own thing academically.

That was all nearly 20 years ago, and the startling fact is that it is all still happening. Since the average student 'choosing' his subject modules has had little opportunity to assess alternatives or foresee the consequences he is only too open to suggestions from his academic adviser whose advice is often biassed by his own academic field, the need to balance student numbers in classes, and his ignorance of what subjects are necessary to the student.

Furthermore, the MDS attracts just those youngsters who have not decided, (or had decided for them) what they want to do for a living because of its apparent flexibility and open-endedness. What happens almost immediately is that the student is faced with a complex choice system, and an academic tutor, who can be almost as bewildered as the student, to help him through it. Should he fix on the wrong module in his first semester he may find himself at the end of his course with an inappropriate study background for whatever he has finally decided he wishes to do. That is, always assuming he has decided. The paradox of the system is that while constantly being faced by having to make choices a student can successfully postpone making the real choice until it is too late to do anything about it.

There is one other point I want to make about choice and the problem of identity. I have never had a student in my office struggling with the sorts of difficulties I have been talking about who has not also brought with him or her a history of personal and family stress, of broken or stuck relationships, of inhibiting fears and fantasies. Often it has been the extra anxiety of a continuous assessment, modular structured course which has

triggered off his bid for help, but it can just as easily have been any one of a number of other factors.

At various points along the intricate obstacle race through the maze we call upbringing and education, students fall by the wayside rather like, it often seems to me, an expedition into the African interior - some succumb to the heat, some to the insects, some carry too heavy a burden, some realize,quite understandably, they would rather have stayed at home. At the point of failure, and rarely before, they surface for help in my office, (those, that is, who do not sink into the undergrowth and disappear from view altogether). This failure becomes the catalyst for all the natural crises and occupational hazards the average young student is heir to, and bingo! we have a full scale 'adolescent identity crisis' on our hands.

Inter-Institutional Cooperation: A Perspective from the United States

Richard Miller

One might begin by asking this question: 'How effective are the relations of your institution with others in the general region?' This question, in turn, might be viewed in two ways - in terms of general rapport and working relationships with various other institutions in the region, and in terms of informal and formal inter-institutional co-operative programmes.

General rapport and effective working relationships with other postsecondary institutions in the region are desirable and probably necessary even considering the enlightened self-interest by which every institution places itself first. These questions might be helpful in appraising these more general inter-institutional relationships:

1 Are general feelings toward other postsecondary institutions in the region friendly and co-operative, and vice versa?

2 Have media stories been favourably inclined toward the institution in terms of its relations with other colleges and universities in the region?

3 Have formal and informal human and material resource sharing programmes been explored and tried?

4 Have sufficient initiatives toward co-operative endeavours been undertaken by the institution?

Turning to second dimension-interinstitutional co-operative programmes: one can say that their numbers in the United States have increased substantially in recent years. Lewis Patterson (1975) reported that in 1968 there were 31 consortia with 300 member institutions that met his criteria of being voluntarily formed, having a full time director, having three or more member institutions, having multi-programme, and reporting tangible member

support for the central organisation. By 1975 Patterson reported that the number of consortia had grown to 106 with 1,100 members. A United States Office of Education publication by Raymond Moore (1967) listed 1,017 consortia although these were not subjected to the rather rigorous criteria that were used by Patterson. A 1970 study by the New York State Department of Education identified 425 district co-operative arrangements there; a 1972 study by the Illinois Board of Higher Education listed 190 co-operative arrangements for the state of Illinois; and a 1975 study of the state of Indiana by Jellema found 71 co-operative arrangements there.

While these studies did not use similar criteria and sampling procedures and therefore comparisons are not valid, nevertheless, the studies did find evidences of considerably more inter-institutional co-operation than might be expected. The following five categories, based upon the Jellema study (1975) is one way to categorise various types of co-operative arrangements:

1 *Educational programmes* include elimination of course duplication, sharing new programme development, joint majors, joint hiring of faculty, student and faculty exchanges, and jointly run international travel programmes.

2 *Administration and business* includes joint purchasing, common calendars, reciprocal tuition agreements, sharing of computers and other educational and social facilities, management information exchange, combined institutional research activities, joint publicity and project development.

3 *Enrolments and admissions* include co-operative recruiting, single application and financial aid forms, relaxation of transfer requirements and accepting credits from other institutions.

4 *Libraries* include union catalogues, joint purchasing, inter-institutional book and periodical loans, and common computer and micromaterial collections and access.

5 *Student-community services* include common remedial education centres, joint health services, co-operative extracurricular programmes ranging from intramurals and art exhibits to concerts and coffee houses, and joint community service projects in areas ranging from law enforcement to work with the aged.

Franklin Patterson (1974) offered these principles for developing new consortia:

1 The new consortium should improve the quality and range of education available to students in each of its constituent institutions.

2 Within the consortium, each institution should preserve its identity and maintain as much autonomy as the constraints of serious co-operation permit.

3 The consortium should minimise duplication of education programmes and redundancy of facilities and should aim at complementarity of academic programmes and facilities among its constituent institutions.

4 The consortium should seek to reduce or control institutional operating costs by collective means wherever possible.

5 The consortium should give central assistance in financial development to member institutions and have a fund raising capacity for collective needs.

6 The consortium should provide planning, development, and coordination for new collective educational programmes responsive to changing needs and new clientele in the area.

7 The governance and executive part of the consortium should have authority equivalent to its responsibility for leadership.

What are the keys to successful inter-institutional co-operative enterprises in the United States? Grupe (1972) listed these factors in consortial success: they are creative, programmatic, expertly managed, academic in orientation, high risk, important to the institutions, open-ended, have intangible impact, permit broad access by faculty and students, and reinforce and strengthen existing programmes. Major difficulties to be confronted, according to Grupe, are these:

1 A new perspective on educational quality is required.

2 Plans for joint operations should be developed realistically.

3 The individuals involved must educate themselves about the potential benefits co-operation can lead to.

4 The consortium must maintain a relationship of neutrality with its member colleges, while balancing benefits derived by them.

5 The consortium must be accepted as an extension of the member college campuses.

6 The institutional focus cannot be subverted.

7 The consortium must go beyond the mere form of co-operation.

8 The totality of the consortium effort must be considered seriously if major conflicts are to be avoided.

A study of obstacles to inter-institutional co-operation (Berg, 1972) compared the perceptions of a small number of university related people toward co-operation in two midwestern consortia. His findings are given in Figure 1.

Consortia and inter-institutional co-operation will be an increasingly significant aspect of postsecondary education. These efforts must serve bona fide needs and interests and each partner must be willing to 'give a little' in the interest of others. And systematic and periodical evaluation of the co-operative arrangement should be undertaken. Such evaluations can be complicated but they can be done fairly well now although more research and study of evaluative methods of consortia are needed.

The Illinois Model

The remainder of this paper will focus upon a statewide inter-institutional co-operative programme in one of our largest states.

The Illinois General Assembly in 1972 enacted legislation known as the "Higher Education Co-operation Act" (HECA). The legislation in providing $350,000 for grants to programmes for inter-institutional co-operation in higher education, stated: "Any public institution of higher education may participate in the establishment and operation of programmes of inter-institutional co-operation with other public institutions of higher education or with both public and non-public institutions of higher education."

The Higher Education Co-operation Act did not just happen; it was the outgrowth of interest and action in inter-institutional co-operation in Illinois. At this point it will suffice to say that the HECA act was a direct outgrowth of the collegiate common market concept that was developed in 'Master Plan, Phase III', 1971. A 1972 'Survey of Inter-institutional Co-operation in Illinois' found that many inter-institutional co-operative arrangements were

Figure 1 Ranking of obstacles to inter-institutional co-operation among participants in Danforth conference on consortia

	Faculty	Consortium staff	Administrators	Other	Entire Group
a Geographical isolation	7th	8th	6th	6th	7th
b Legal restriction	9th	7th	9th	9th	9th
c Limited financial resources	4th	5th	3rd	2nd	2nd
d Institutional Parochialism	1st	2nd	1st	1st	1st
e Lack of concern for the public interest	8th	8th	8th	6th	8th
f A reluctance to co-operate with competitors	4th	6th	2nd	3rd	2nd
g Personal or institutional ambition	3rd	3rd	4th	5th	4th
h Lack of time to devote to leadership in co-operative activities	2nd	4th	5th	6th	6th
Number of respondents	21	10	20	5	56

/Note that some ranks were tied eliminating next lowest rank/

already operating and the psychological climate was favourable to such arrangements.

Purposes of the Act

The following provision in the legislation outlines the purposes of the Act:

A programme of financial assistance to programmes of inter-institutional co-operation in higher education is established to implement the policy of encouraging such co-operation in order to achieve:

- an effective use of educational resources
- an equitable distribution of educational services
- the development of innovative concepts and applications
- and other public purposes.

Summary of Expenditures

Excluding the 1977 recommendations, a total of 262 proposals have been submitted and 81 recommended for funding, or 31 percent. A total of $8.4 million dollars has been requested and $1.4 awarded, or 17 percent.

The initial Act contains purposes and criteria that are used for making funding decisions on the proposals. In addition to the purpose cited above, these criteria are used in recommending projects for funding:

In awarding grants to inter-institutional programmes under this act, the Board shall consider in relation to each programme:

- whether the local community is substantially involved
- whether the plan is consistent with the Illinois master plan for higher education
- and such other criteria as it (BHE) determines to be appropriate

The Board has developed the following 'other criteria' for the proposals:

- education significance
- soundness of design, procedure or operation plan
- relationship between ends to be achieved and means for their accomplishment

Distribution of HECA funds

HECA funds are used for three types of programmes: three regional graduate study centres receive HECA

funds and 14 consortia sponsored programmes receive or have received HECA support. Seven of the fourteen consortia are on-going, multi-purpose consortia, and the other seven are special purpose consortia without on-going status at this point, for which HECA funds constitute a minor source of funding. Twenty-nine institutionally sponsored projects have been funded by HECA, four of which have received multi-year grants. A decided shift has taken place away from institutionally sponsored projects toward consortia sponsored projects since HECA's beginning. The percentage of expenditures for regional study centres has remained relatively constant.

Evaluation

The effectiveness of HECA should be judged by the extent to which its activities are in concert with the three general purposes of the act.

Effective use of educational resources

This purpose is appraised in terms of possible public tax dollar savings, individual student savings, and additional resources generated by HECA funded programmes.

Public savings

Postsecondary enrolment projections in Illinois outlined in the 1976 'Master Plan for Postsecondary Education' indicate 'that there will be significant increases in headcount and full time equivalent (FTE) enrolments through the early 1980s followed by equally significant decreases. Approximately half of the projected increases in headcount enrolments through 1980, however, will be accounted for by students in general studies programmes. Another significant feature of the projections is that FTE enrolments for baccalaureate and occupational studies increase by only 38,000 students through 1980 and decline thereafter to levels below 1974 enrolments.

Several HECA programmes, including the three graduate centres, are serving considerable numbers of students through rental or contributed facilities that can be released easily and quickly if future enrolments warrant this course of action. Meanwhile these rental or contributed facilities will help the state to accommodate the significant increase in students that is projected for the next five years without constructing additional

facilities.

Individual savings

The evidence indicates that the three graduate study centres and several other HECA developed programmes are providing substantial savings to Illinois residents who want to continue their education but for various reasons cannot attend the traditional collegiate places. Two examples are given: The Quad-Cities Graduate Study Centre is a consortium of nine public and private colleges and universities in two states: Augustana College, Iowa State University, Marycrest College, Northern Illinois University, Southern Illinois University, University of Illinois, University of Iowa, University of Northern Iowa, and Western Illinois University.

The University of Iowa was teaching a course on human resources management in its MBA sequence with the Centre during the 1974 summer programme. The 38 members of the class found that they saved in driving an average of 113.4 miles per class by having the course offered at the Centre as compared with taking it in Iowa City, or a semester savings of 64,638 miles of travel. The students in the course then calculated these student cost savings for the 1973-4 academic year:

113.4	average miles saved per class
x 15	class sessions per semester
1701	average miles saved per person per course
x .12	estimated cost per mile of driving
$204.12	average saving per person per course
x4327	number of 1973-74 registrations at the Centre
$ 883,227.24	

This study found that the Centre saved its students a considerable sum in driving costs in 1973-74. And the savings in time was found to be 147,000 hours, or the equivalent of 74 individuals working full time for one year. These are minimal figures because the University of Iowa is closer to the Quad-Cities than all institutions with the exception of Augustana and Marycrest Colleges. An additional point: students have paid $1.66 million dollars to Quad-Cities Graduate Centre for tuition, which the Centre has funneled into the tuition income accounts of those member institutions that offer courses.

The Graduate Studies Centre at Millikin University coordinates off campus courses and programmes

offered by Eastern Illinois University, Illinois State University, Sangamon State University, and the University of Illinois at Urbana-Champaign. These institutions are an average distance of a 90 mile round trip from Decatur. A Sangamon State University marketing professor in a human resource management course found that 27,000 student travel miles were saved for her course. Calculating on the basis of a typical savings of 20,000 student miles per course, in the Centre's first two years the students saved over a million miles of driving, based upon the 55 Centre based courses. At 50 cents per gallon for gasoline, more than $36,000 in student savings were realised in gasoline costs alone.

Additional resources generated

The business and industrial community in the greater Quad-Cities area has contributed $182,000 to the operational expense of the Centre, and the Iowa State Legislature matches the Illinois state monetary contribution of approximately $70,000. The Caterpillar Company has contributed $20,000 to the Graduate Study Centre at Millikin; and community support is evident in Rockford also. The Southern Illinois Collegiate Common Market received in 1974 a seven year grant for $854,000 from the Veterans Administration to develop nursing and other health care manpower programmes for Southern Illinois.

In the span from 1973 to 1975, a sample of 35 projects (or 53 percent of all projects) received $760,100 from HECA funds. For these projects, participating educational institutions contributed $530,368, or an additional 70 per cent above the state allocation. Another $686,142 was generated from outside sources. Funds from participating institutions and outside sources added $1,216,510 to the $760,100 from state funds for HECA, or 160 per cent.

Equitable distribution of educational services

The 1972 Illinois Constitution speaks to educational rights in these terms: "A fundamental goal of the People of State is the educational development of all persons to the limits of their capacities. The State shall provide for an efficient system of high quality public educational institutions and services."

The three regional graduate study centres had 8,455

course registrations for the 1975-76 academic year. It can be presumed that the education of these students was facilitated by having available the more extensive distribution of educational services through the three regional graduate study centres.

More equitable distribution of educational services is achieved also through some consortia and some institutional projects. For example, the Southern Illinois Collegiate Common Market (SICCM) is an incorporated consortium consisting of John A Logan College, Rend Lake College, Shawnee College, Southeastern Illinois College, and Southern Illinois University at Carbondale. It serves a segment of the State stretching 100 miles from Mt. Vernon on the North to Cairo on the South, and 85 miles from Carmi on the East to Gorham on the West. One of SICCM's activities has been the establishment of an associate degree in nursing (ADN) programme. SICCM determined that the ADN programme was a high priority because of a severe shortage of registered nurses in the region and that since clinical facilities are widely dispersed this programme should be a co-operative one. Individual institutions committed $40,000 to the programme thereby allowing each to benefit from a programme that would be beyond the fiscal capabilities of any single institution. The National League for Nursing identified the programme as one of the 32 nationwide Open Curriculum Pilot Projects, meaning that guidance and consultation will be available for programme development and evaluation.

How does a region plan for the most effective use of its total educational resources? One approach to finding some answers is the Council for Area Planning of Educational Services (CAPES), which is being spearheaded by Waubonsee Community College in co-operation with Aurora College, Elgin Community College, Judson College, Northern Illinois University, and affiliated and community agencies. CAPES is undertaking an inventory of all educational resources in the Kane County area, developing a planning body that can represent the major educational interests of the area, and planning to recommend what educational activities might be done most effectively by which institution or agency.

Development of innovative concepts and applications

The development of two new regional graduate centres and the substantial expansion of another; development of seven new on going consortia, each with a

programme tailored to the needs and interests of the area; and several new institutional co-operative programmes are examples of how HECA funds are providing programmes that meet this purpose. Programmes of two consortia sponsored HECA programmes and two institutional sponsored HECA programmes are given as examples.

The Illinois State Theatre is a statewide programme for developing a theatre that will bring student performers and professional performers from various institutions together on the stage. The theatre will perform at various campuses and use students and professional performers in the area. Co-operating institutions are Blackburn College, College of St Francis, Eastern Illinois University, Governor's State University, Illinois State University, Knox College, Loyola University, Monmouth College, Northern Illinois University, Southern Illinois University at Carbondale and at Edwardsville, University of Illinois at Urbana-Champaign, and Western Illinois University. Only one other state has such a programme.

The West Suburban Intercollegiate Council consists of four suburban Chicago private colleges: Aurora College, George Williams College, Illinois Benedictine College, and North Central College - and each college contributes $5000 as well as in-kind contributions. The Consortium is developing an information and planning system for the four colleges as individual units as well as parts of a whole. It includes unit cost analyses for all aspects of programmes and operations, enrolment trends, and development of an overall management information system for the four colleges.

Two examples of innovative institutional sponsored programmes: The HECA project on the Regional Model for Utilising Telecommunications Technology included Bradley University and Western Illinois University. The telecommunications model that was developed has become the model for the recently established 'West Central Illinois Educational Telecommunications Corporation' that includes Black Hawk College, Bradley University, Illinois Valley Telecommunications Corporation, Sangamon State University, and Western Illinois University. This public broadcasting approach, with system micro-switching capabilities, will offer new and diverse educational opportunities to citizens in west central Illinois.

The University of Illinois librarian staff at Urbana-Champaign worked with librarians in the other 13 senior Illinois university libraries in developing an automated cataloguing and bibliographical network. The system has been largely developed and tested and it awaits an infusion of funds to become operational. Some additional developmental aspects are proceeding through assistance from non-HECA funds..

Strengths and Weaknesses of the HECA Programme

The staff finds that the overall HECA programme has these strengths and weaknesses:

Strengths

1 Students and adults are served who in many cases could not attend programmes offered by traditional in-place institutions.

2 Additional educational programmes are provided without expenditures for permanent facilities and buildings.

3 Cost savings are realised by students.

4 New programmes and innovative approaches are being developed through HECA funds.

5 Substantial non-state funds have been generated for HECA-funded programmes.

6 HECA programmes usually continue after contracts are terminated. One test of the success of a funded project is the extent to which the programme continues on its own after funding is officially terminated. The HECA survey of project directors found that 59 percent answered 'very much' or 'much' to the question: 'To what extent did the programme stimulate sufficient interest and commitment by your institution for continuation of significant aspects of the programme beyond the HECA contract time?'

Several out of date consultants and interested scholars and observers have analysed the HECA programme, and their comments have been documented previously. In general, these reports are firmly supportive.

Weaknesses

1 The HECA programme is mandated to be innovative, and this thrust means that some orderliness is sacrificed in the interests of creativity and

innovativeness. This circumstance is related largely to the people who are project directors of HECA programmes. Generally speaking, they are innovative individuals who may allow this perspective to overshadow their interest in giving adequate attention to the details of administrative policies and procedures.

The IBHE staff, therefore, has been tightening HECA administrative procedures. Also, starting with FY1977 programmes an external audit will be required at the conclusion of each individual HECA project.

2 With the passage of legislation and subsequent gubernatorial action being in July, the availability of funds has placed the programme out of phase with the academic year because an additional four or five months are required to complete the grant-awarding process. In order to improve this situation, the 1977 HECA proposals were approved tentatively in May 1976, contingent upon final legislative and gubernatorial action in the late spring or early summer. This schedule will allow funds to be made available to the institutions toward the end of summer or in phase with the academic year.

3 Since funds have been awarded in November or December in the past, it was necessary to carry funds over into the next fiscal year in order to allow projects more than four or five months of operational time which would have been the case if funds terminated with the conclusion of the fiscal year. This essential flexibility, however, made more difficult the administration of the programme. With the new accelerated awarding procedure beginning with the FY1977 proposals, all projects will be awarded and run concurrent with the one fiscal year. This new policy should facilitate greater administrative effectiveness.

4 Problems of communication between/among the applicant institution's project director and those in co-operating institutions was evident from the study made of project directors and co-operating institutions. Some co-operating institutions have had a very nominal role in the conduct of the project, and in a few cases the IBHE staff has found no meaningful communication after the applicant institution receives the grant. In the future, IBHE staff will require more evidence of meaningful involvement of co-operating institutions.

5 Some projects have achieved only modest success. The HECA programme is mandated to be innovative

and risk-taking by nature and therefore more prone towards peaks and valleys than programmes that perpetuate or involve minimal risks. The percentage of projects enjoying modest success is difficult to ascertain. If one uses the project evaluations made by an external review team of completed projects, which used as evidence both the final evaluation report and a personal interview with the project director, an estimated 10 percent could be judged as very average or failures.

Conclusion

The HECA programme, now in its fourth year of operation, has been extensively evaluated in many ways by both Illinois educators and by others from out of state. These six points would seem to summarise the findings:

The programme is providing a substantial cost-avoidance savings to the State of Illinois. Permanent collegiate facilities and faculties have been avoided at the Quad Cities and Rockford with considerable savings to the citizens of Illinois, yet citizens in these areas do have educational opportunities available to them through the Centres.

HECA is providing significant savings in *money* and *time* to students. Several examples, in addition to the two given earlier, could be used to illustrate the importance of this point to students and adults who are pursing additional learning.

HECA has stimulated a substantial institutional commitment in terms of human, material, and fiscal resources. The estimates of this commitment have varied from one to three times the appropriation that has been received during each of the past four years.

HECA is providing new educational opportunities to Illinois students. These opportunities are flexible and can be aborted easily when the needs change. The Southern Illinois Collegiate Common Market, for instance, has developed an associate degree nursing programme for its five institutions that is benefiting these institutions through a needed new programme but without duplication of effort and with substantial cost avoidance.

Some weaknesses have become evident during the conduct of this staff evaluation as well as from the results of the survey of project directors' points of view. These weaknesses stem from the innovative nature of the HECA programme, the timing

of the announcements of the grant awards, the communication procedures between applicant and co-operating institutions, and the turnover among institutional project directors. Mobility also can cause problems in meeting the administrative requirements that have been established by the Illinois Board of Higher Education.

HECA is a forward looking programme that is allowing Illinois educators to learn as much about inter-institutional co-operation as any place in the nation. If curricular flexibility and lifelong learning will be increasingly significant aspects of our future, as at least five nationally prominent studies have stated within the past two years, then the State of Illinois is moving in the right direction, and the HECA programme is serving as a significant vehicle for this development.

Higher Education Cooperation in the European Community

Ronald Martin

Co-operation in the field of higher education among the nine Member States of the European Communities is a relatively new phenomenon. The Treaty of Rome establishing the EEC, signed just 20 years ago, contains no reference to education, and there was therefore no Community mandate as such for involvement in this field. Involvement in education and training matters was restricted to the development of a common policy for vocational training and the retraining of workers, especially those affected by economic and structural change in industry, and to the mutual recognition of qualifications for the liberal professions, such as doctors, dentists, engineers and architects. These measures had as one of the basic aims of the treaties - that of ensuring the free movement of persons throughout the Community.

At about the time of the enlargement of the Community upon the accession of the three new Member States in January 1973, the Communities began to take an interest in education - for the simple reason that in the process of building a community of peoples, of nations, and of cultures, one cannot ignore this factor which has such a vital influence on all other policies. We are all products of the educational systems of our countries. We all spend a considerable part of our lives being educated - through the primary, secondary and tertiary levels of education, and later through the various opportunities afforded by further, adult and continuing education. What we experience and what we learn, condition our approach to, and the effectiveness of our contribution to, the society in which we take our place. It is thus that education must be seen as

a vital factor in the success, or otherwise, of national and European policies in a wide variety of fields.

Although no specific mandate derives from the treaties, provision exists under Article 235 of the Treaty of Rome for the Communities, if they deem it necessary in the process of achieving the aims of the Treaty, to introduce measures not already specifically provided for in the other articles. It was thus, following the resolution on co-operation in the field of education adopted by the Ministers of Education of the nine Member States on 6 June 1974, the communiqué of the conference of heads of governments of Member States in Paris in December 1974, the European Parliament's endorsement of the importance of the Community's activity in the field of education, and the opinion of the Economic and Social Committee that "education is central to the full and healthy development of the Community", that the Ministers of Education of the nine Member States, reaffirming their desire to achieve European co-operation in education, and aware of the contribution that such co-operation could make to the development of the Community, adopted on the 9th February 1976 a resolution embodying a first action programme in the field of education.

This action programme provides for co-operation among the Member States in a variety of education actions, some of which are to be undertaken by the Member States themselves, whilst others form the subject of action by the Member States acting in concert at Community level. One of the principal sections of this resolution deals with measures to be undertaken in the field of higher education. The Ministers affirm that "it is necessary to promote co-operation in the field of higher education". They were careful to stress that what was intended by their resolution was not a harmonisation of educational systems, not a standardisation of systems, but a positive co-operation preserving and building upon the rich diversity which exists in the several Member States, and in the field of higher education recognising and respecting the independence of higher education institutions. Thus co-operation at the European level means essentially building upon the best that already exists.

Co-operation in the field of higher education with-

institutions in different Member States. Such courses would not be exchange schemes, where groups of students are exchanged between institutions, often without any requirement that they follow any particular programme. Nor would they be 'stages', or periods of industrial or other practical experience spent in another country. Nor would they be the traditional one year abroad which is the normal requirement for students on modern language courses. Rather, they are integrated courses of study, in which either students following them spend a recognised part of their period of study in each of the participating institutions, or where parts of the course are provided by members of the staff of the other institutions, and/or where - in the discipline or area of study concerned - the courses contain an element that is related to the development of the European Community.

To be eligible for support under the Community scheme, courses are required to have a minimum duration of three months. Courses may be at any level within the broad spectrum of higher education, and in any academic discipline. Programmes relating to joint research are not at present covered by the scheme, although it is expected that a parallel scheme relating to collaboration in the field of research will be introduced at a later date - possibly in 1978. Grants under the scheme are essentially of a 'pump-priming' nature. They are intended to facilitate the further development of joint courses which have already been the subject of preliminary planning, or for the evaluation of existing projects, experience in the running and organisation of which could usefully be disseminated throughout the Community, as a guide to other institutions planning similar initiatives.

Grants are normally of about £ 1,500 to £ 2,000 per project and of a non-recurrent nature. They are made to one only of the institutions participating in a joint study programme proposal, which is responsible for the administration of the grant. They are intended for the payment of travel and subsistence expenses for representatives of institutions attending joint planning meetings, expenses integral to the arrangement of joint meetings concerned with planning or monitoring a project, or the production of teaching material to be used in common by the institutions concerned. They do not cover the costs of travel and sub-

in the Community has three main aims - to increase contacts between institutions of higher education, to eliminate all obstacles currently impeding the free movement throughout the Community of teaching staff, students and researchers, and to secure the academic recognition of diplomas wherever obtained in the Community, and of periods of study wherever carried out in the Community.

Three types of action were proposed at Community level to promote increased contacts between higher education institutions. Firstly, the encouragement of links with and between organisations representing higher education institutions. The Communities are already in dialogue with the Liaison Committee of Rector's Conferences of the Member States of the European Communities, a body which has been in existence for some time, and which provides a direct link between the Communities and the nation rectors' conferences, in the case of the United Kingdom with the Committee of Vice-Chancellors and Principals of Universities. There is no similar body to the Liaison Committee for institutions of higher education which are not universities in the traditional sense, for example the polytechnics in the United Kingdom, the Ecoles Supérieures in France and the Fachhochschulen in the Federal Republic of Germany. The Commission intends sometime later in 1977 to arrange a 'contact meeting' for national organisations representing such non-university higher education institutions, to examine ways in which improved contacts with and between them, and the organisations they represent, can best be achieved. As far as the United Kingdom is concerned, the Commission is already in close contact with the Committee of Polytechnic Directors, but there are other institutions engaged in higher education work - such as some of the Colleges of Higher Education, Teacher Training Colleges, Art and Nautical Colleges, for example, which are not attached to Polytechnics, and with which we have no direct contact, either through a representative organisation or otherwise.

In the middle of last year, the Education Committee approved a scheme of Community grants for the development of joint programmes of study between institutions of higher education in Member States of the European Community. The hope is that institutions will develop trans-national courses, to be planned and provided jointly by two or more

sistence of members of staff teaching such courses, nor of students attending the courses. Institutions wishing to apply for a grant under the scheme are required to submit a joint application to the Commission - duly signed by the competent authorities of each institution. This is essential, since the development of joint programmes of study clearly has implications for the future financial budgets of institutions, and the competent authorities must be aware from the outset of what those possible implications are. In the first phase of the operation which took place last year, some applications were lodged by hopeful heads of department, without the official support of their institutions - only to be withdrawn subsequently when discovered by the competent authorities and disallowed!

Although the scheme was only announced for the first time on 1 June 1976, with a closing date for applications of 30 September, considerable interest was aroused in the Member States. A large number of enquiries by telephone, letter and personal calls poured into the Commission's offices during the summer, and eventually we were called upon to consider some 60 applications relating to joint programmes, involving almost 200 institutions of higher education in the Community. This was after an equally large number of applications in respect of exchange schemes, joint research programmes, and other collaborative ventures not covered by the terms of the scheme, had been filtered out. It is thus clear that a very large number of higher education institutions in the Community are interested in collaborating and developing joint programmes with their counterparts in other Member States.

The Commission was assisted in the selection process by a small panel of representatives of higher education institutions, and eventually decided to offer grants to 74 institutions in respect of 32 joint programmes. These covered proposals at both the undergraduate and post-graduate levels, in a very wide range of disciplines - from the social, natural and applied sciences to law, medicine, education, business studies, and art and design. A further interesting point to note is that the projects approved for grants in 1976 covered every Member State of the Communities, except Luxembourg which has no full university institution.

Most applications related to co-operation between two institutions, but some involved three institutions and a few (four in all) four institutions.

The Commission will follow closely the development of these programmes, and carry out its own evaluation of the operation of the scheme. In addition, it requires institutions awarded grants to report on their use and the results achieved. It also welcomes the opportunity of direct contact with those responsible during the planning stages of a project, and information as the project develops as to its success in implementation and the kinds of problems encountered. It is clear that all institutions planning the kind of joint study programmes envisaged under the scheme encounter, to a greater or lesser degree, the same kinds of administrative, technical and other problems in developing and launching their programmes. For this reason, the Commission will probably undertake an in-depth study of some typical ventures, successful and unsuccessful, to identify these problems, so as to be in a position to advise potential grant-holders accordingly. The scheme is to be repeated in the current year in respect of grants for use in the academic year 1977-78, with the same overall budgetary allocation as for 1976 - approximately £ 50,000.

A second scheme of grants, to be launched shortly, provides for the support of short study visits by teaching and administrative staff and researchers to other Member States of the Communities. This scheme too is part of the programme to foster the development of co-operation in higher education by increasing contacts between institutions. Its intention is to enable individual members of the teaching, research, or administrative staff to study specific aspects of the organisation and administration of different higher eudcation systems and institutions within the Community, and to understand their relationship to local, regional and national structures. This includes opportunities for the study of the organisation and methods of teaching and research in other institutions. It is not the intention of the scheme to provide opportunities for higher education staff to pursue their personal academic study or research in another Member State. Grants will be made for visits normally of four to six weeks' duration, and preference will be given to visits covering institutions in more than one Member State.

The underlying aim of this second scheme is to extend knowledge and experience so as to multiply in the longer term opportunities for collaboration between institutions of higher education in the Community. The funds available in 1977 are very limited, and it is not expected that more than a small fraction of the demands for grants for visits can be met. The Commission therefore, in its selection process, will consider the extent to which individual applications for visits have a specific and clearly defined purpose and may be expected to contribute to the Community objective of increasing collaboration between institutions. Applicants are required to set up their own programmes, and to secure the prior approval of their own institution and of the institutions to be visited. Quite clearly, ability in the languages of the countries to be visited is of paramount importance if the fullest value is to be obtained from the visit, and the Commission asks applicants to supply a statement on this point.

In order to promote the free movement and mobility of teaching staff, students and researchers, the Community will first of all arrange a debate with representatives of higher education - to be held in Bonn in June of this year - to examine the question of developing a common policy among the various Member States on the admission of students from other Member States to higher education institutions. Admissions policies, and admission requirements, currently vary from one Member State to another, and frequently represent a very real obstacle to free movement.

Another obstacle is the system of student support. Scholarships, studentships, and research and teaching fellowships are in the main awarded for use in the country of origin, and are rarely transferable for use in other countries, unless specifically provided for in the terms of the award. A report is currently being prepared by the Commission, based on information provided by the Member States, on support schemes currently existing in their countries, and on the problems of extending their validity to enable the holders of grants and fellowships to pursue their studies anywhere in the Community. At the same time, the Commission is actively examining all the other obstacles which currently hinder the mobility of students, and of higher education teaching and research staff in the Community.

One particular problem has been the possible loss of seniority or of pension rights by a teacher or researcher spending a part of his service in another Member State. This problem is also currently under examination, with a view to finding ways in which periods of service in teaching or research spent in other Member States can be taken into account when calculating seniority or pension entitlements.

A further essential requirement for free movement and mobility is for the academic recognition of diplomas and of study periods and studies carried out. A large number of bilateral and multilateral agreements already exists.

But there still exist all too frequent cases of students undertaking courses of study, or part courses of study, only to find that on transfer to another Member State such courses, or periods of study are not recognised. The eventual aim in the Community must be for it to be possible for any pupil or student, at any stage of his education - be it in the primary, secondary, or tertiary sector - to move from one Member State to another, from one course to another, and to have the period spent properly credited, and the certificate, diploma or other end qualification properly recognised. There should be no need to have to repeat courses, or to 'go back to square one' and start again in the new country. This infers a certain amount of compatibility between educational systems, and a mutual confidence between the Member States regarding the academic content of courses at all levels. Much has already been achieved regarding the mutual recognition of professional qualifications for the liberal professions, starting with doctors, whose qualifications are now mutually recognised, and who, from the middle of December last year, enjoy free movement throughout the Community. This is being gradually extended to other liberal professions for which university level qualifications are the normal requirement.

The whole question of co-operation in the field of higher education depends not only on what national governments and what the Community may do to facilitate it. It depends above all on the desire by individuals, and by institutions, to co-operate. Many of the most successful schemes of collaboration between institutions have come into being because some one was alive to the need, seized an

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